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# Permian Brachiopods of West Texas, VI

G. ARTHUR COOPER  
and  
RICHARD E. GRANT

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# Permian Brachiopods of West Texas, VI

*G. Arthur Cooper  
and Richard E. Grant*

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## ABSTRACT

Cooper, G. Arthur, and Richard E. Grant. Permian Brachiopods of West Texas, VI. *Smithsonian Contributions to Paleobiology*, number 32, pages 3161–3370, 2 tables, 1977.—The sixth and final part of a monograph of Permian strata and faunas of West Texas and adjacent parts of New Mexico, this volume consists primarily of faunal lists and a taxonomic index of the previous five parts. A list of brachiopods grouped according to R. E. King's localities and compiled from King's data by the authors is followed by the author's compilation of lists of brachiopods found at the localities designated by the United States Geological Survey, the American Museum of Natural History, Kansas University, and the National Museum of Natural History. The list pertaining to the last three groups of localities carries a code indicating the approximate number of specimens of each taxon in the museum collections. A list of the authors' collection of ammonites is included, followed by lists of their fusulinids; these are appended to this monograph on brachiopods because they have important implications for dating and correlation. Also included are Corrigenda (with reference to the previously published parts) and suggestions for future related research.

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# Permian Brachiopods of West Texas, VI

*G. Arthur Cooper  
and Richard E. Grant*

## Introduction

Detailed study of the brachiopods of West Texas requires lists that consolidate the known data concerning associations of genera and species at the various localities. A summary showing the stratigraphic distribution of the species and genera also is essential. These items (comprising faunal lists and Tables 2 and 3) are furnished in this part six of our study of the Permian brachiopods of West Texas. Also included are miscellanea that we believe will be useful to students of the Permian.

During our extensive field and laboratory work stretching over more than a quarter century we collected many specimens of other phyla in addition to the brachiopods. We also amassed specimens of other shells from the residues of the solution program. Many of these will be useful in other studies. Realizing the value of the Fusulinacea and Ammonoidea in dating and correlating strata, we made special effort to collect specimens of these important fossils. We found fusulinids at 366 localities and ammonites at 157 places. At a few localities both of these were taken in addition to the brachiopods.

In correlating strata, especially those in separated areas, it is desirable to have as full a representation of the faunas as can be obtained. It is of

considerable interest and concern that establishing correlation and dating in terms of only one phylum may produce results conflicting with those obtained in using other phyla. Inasmuch as many of the stratigraphic divisions of the Permian of West Texas were established on the basis of fusulinids through the classic work of Dunbar and Skinner (1937), it is important to record as much information on this fauna as possible. We were helped immeasurably in attaining this goal by the generous assistance of Dr. C. O. Dunbar, formerly at Yale University, Mr. Garner Wilde of the Exxon Company, Midland, Texas, and Dr. Charles A. Ross, Western Washington State College, Bellingham, Washington. Each identified our fusulinids from different parts of the Glass Mountains. Wilde, who identified lots from 279 localities, also examined our fusulinids from the Chinati Mountains.

Ammonite and fusulinid dating in the Glass Mountains has usually been in close accordance, but some conflict in dating Bed 2 of P. B. King's section in the Wolfcamp Hills is now evident. Our ammonites were identified by Dr. Arthur K. Miller, University of Iowa and, after his untimely death, by Drs. William M. Furnish and Brian G. Glenister, both of the University of Iowa.

All these data will supplement the brachiopod information and put many key fossils in their proper association. To enrich the lists presented below, further reference to other works on the

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Permian faunas of West Texas and the Glass Mountains can be made: Finks (1960) for sponges, Kier (1958) for echinoids, Yochelson (1956, 1960) and Batten (1958) for gastropods, Newell and Boyd (1970, 1975) for bivalves, Allyn Smith (1976) for chitons, and Elias and Condra (1957) for bryozoa. Studies on Glass Mountains fossils by Jerzy Federowski on the tetracorals and by Harrel Strimple on crinoids are pending. A fair number of trilobites have been collected but there is no worker studying them.

In this final part we correct errors in the lists of localities appearing in the first part of our study (pages 128–164) and record additional localities. We also include revisions of the lists of locations arranged by formations that appear in Part I (pages 165–166). Throughout each part we have recorded the localities for each species. Occasional citations now prove erroneous. Consequently the lists included in this last part of the monograph are final for each species. If a name appears herein in the faunal list under a given locality but the locality citation does not appear in the description, this signifies an addition. Contrariwise, if a locality number appears in a description but the species is not recorded in the faunal list under that locality, this constitutes a deletion of the locality for that species. In any case the lists herein represent our final checking of the fauna.

**FURTHER ACKNOWLEDGMENTS.**—Over the four years in which the various parts of this work have appeared, we have been assisted by persons whose names are not mentioned in the first part. Dr. Porter M. Kier, Director of the National Museum of Natural History, has taken an interest in the study, has participated in part of it, and has facilitated its publication. We give our thanks to him for making early publication possible. We are much indebted to Mr. Albert L. Ruffin, Jr., Series Managing Editor, who took a personal interest in the project and edited the first two parts and set the format of the books. Mr. John S. Lea, formerly of the editorial staff, edited Parts III, IV, and V. We are most grateful for his enthusiastic help. Mrs. Barbara Spann, editor of Part VI, brought the structure and numerous details of this final volume into a more coherent and useful format. To Mr. Vern Shaffer, Series Production Manager, watchdog over the illustrations, we owe much for his insistence on the highest quality of reproduction of often difficult subjects. To all of these members of the Smithsonian Institution Press we give our thanks.

We are also indebted to and thank Mr. Rex A. Doescher, Research Assistant, Department of Paleobiology, for preparing the index, ferreting out inconsistencies and errors in the manuscripts, and taking an interest in the publication.

# Faunal Lists

## Brachiopods

### *R. E. King Localities*

The subjoined list of brachiopods has been compiled from R. E. King, "The Geology of the Glass Mountains, Texas, Part II: Faunal Summary and Correlation of the Permian Formations with Description of Brachiopoda" (1931) and arranged according to the Glass Mountains locality numbers used by King in that work. Emendations are included where necessary to supplement the descriptions of those localities given in Part I, pages 128–134, of the present monograph. In addition to listing the data extracted from King, we give the modern generic name or corrected specific name when we can be certain of it. Species marked with an asterisk were examined by Cooper at Yale University. Re-examination of these specimens enabled us to revise some names in the list that appeared in conflict with current views. For example, *Uncinuloides* (now *Torynechus*) is recorded by King (1931:119) from the Wolfcamp formations through the members of the Word Formation, as well as from the Hess and Leonard. We found it only in a narrow zone that straddles the boundary between the upper Skinner Ranch Formation and the lower Cathedral Mountain Formation. King occasionally confused it with *Rhynchopora*, a similar appearing genus.

Many of Girty's species described originally in his "Guadalupean Fauna" (1909) are identified by R. E. King at levels far below those of the Guadalupe Mountains whence they originally came. *Martinia rhomboidalis* Girty is an example. This is identified by King all through the Glass Mountains sequence but we were unable to find this Capitan species. These Girty names are often marked "doubtful" by us. Some other Guadalupe names are listed frequently and these, together with some common but uncertain Glass Mountains species, are listed without change. These names are recorded and explained below.

*Aulosteges magnicostatus* GIRTY.—The type speci-

men of this species is poorly preserved, immature, and of uncertain locality, yet its name appears in many sections of the list. It belongs to the genus *Chonosteges*, which occurs throughout the Skinner Ranch and Cathedral Mountain formations. Stripped of its spines and with other details obscured by weathering (a problem common to other specimens of the genus due to its usually being found on the outcrop), it is impossible to identify specifically; consequently this name only indicates the presence of the genus.

*Aulosteges medlicottianus* WAAGEN.—This is an asiatic species not properly identified in the Glass Mountains. The weathered specimens figured by King evidently belong to *Edriosteges*. In the list we refer this to a species only where that species is the lone occurrence of the genus.

*Camarophoria venusta* GIRTY.—A variety of specimens from Wolfcamp formations through the Word members are so identified. The name is qualified by us in the rare cases in which we could be sure of the species. The listing, therefore, in most examples, does no more than indicate the presence of a species of *Stenosisma*.

*Composita subtilita* (HALL).—This is a Pennsylvanian species widely identified in that period and in the Permian. Weathered specimens in small number are difficult to identify correctly, and the unqualified name stands as a record of the genus.

*Derbyia nasuta* GIRTY.—This is a large *Derbyia* of poor preservation and thus of uncertain specific character. It is not further qualified in the list.

*Hustedia meekana* (SHUMARD).—This name occurs in many sections of the list. It is a species name that we were unable satisfactorily to re-establish. *Hustedia* is so generalized that we cannot offer corrected specific names for most of its citations.

*Hustedia mormoni* (MARCOU).—This is a common Pennsylvanian species smaller than any that we found in the *Uddenites*-bearing Shale Member of



the Gaptank Formation or in the formations of the Wolfcamp. We are unable to reassign King's listed examples.

*Linoproductus cora* (D'ORBIGNY).—This is a large South American species, the identification of which in Texas is doubtful. In most cases it is qualified only as *L. sp.?*

*Lyttonia nobilis americanus* (GIRTY).—This is a Capitan species described by Girty as *Leptodus americanus*, a name used by R. E. King throughout the Glass Mountains sequence. Wolfcamp and Skinner Ranch specimens so referred usually belong to *Eolyttonia* and those from higher in the column are referable to *Collemataria*. Most of King's material is fragmentary and not specifically identifiable. His names are qualified only in portions of the list pertaining to localities that were the origin of specimens that we can identify with certainty. *Lyttonia* is a synonym of *Leptodus* and now not in use.

*Marginifera? cristobalensis* GIRTY.—The type specimen of this species is generically unidentifiable. It has some features of *Echinauris* but its spines are not preserved and their bases are obscured. Inasmuch as the type specimen is an uncertain entity, so will be anything identified with it. Certain names in the subjoined list can be qualified, but the name indicates only the presence of a small productid.

*Marginifera manzanica* GIRTY.—The same remarks as those dealing with *M. cristobalensis* are apt here also. This is not a *Marginifera*; it is represented by a stripped and worn specimen possibly belonging to a species of *Echinauris* of small size. The name is usually not qualified.

*Martinia rhomboidalis* GIRTY.—This is a common species of the high Guadalupian (Capitan Formation and Bell Canyon Formation, Lamar Member) in the Guadalupe Mountains and Delaware Basin. King identified it at many levels in the Glass Mountains. In our experience, *Martinia* is very rare in the Glass Mountains and none of the listed occurrences can be so identified. Examination of some of King's specimens reveal what appear to be poorly preserved examples of *Composita* and *Neophricadothyris*, both of which can easily be mistaken for *Martinia*. The name is qualified in a few instances only. Specimens identified by King from his locality 57 (Altuda Formation) are probably correctly identified as *M. rhomboidalis*. Another

Guadalupian species, *Squamularia guadalupensis* (Shumard) is also probably correctly assigned at this locality.

*Meekella attenuata* GIRTY AND *M. difficilis* GIRTY.—These names occur in the list at many different levels. Since they cannot be placed specifically, they are not qualified but they certify the presence of one or more meekellas in the fauna.

*Neospirifer triplicatus* (HALL).—This is a fairly common Late Pennsylvanian species of uncertain occurrence in the Glass Mountains Permian.

*Neospirifer pseudocameratus* (GIRTY).—The type specimen is a small narrow form having the appearance of *Spiriferella*, quite unlike the wide fasciculate specimens referred by King to this species from several levels in the Glass Mountains sequence. The species name is qualified only when we are certain of the reassignment.

*Productus hermosanus* GIRTY.—This is a Pennsylvanian species that, in the Glass Mountains, is usually represented by fragmentary and worn specimens that if well preserved would probably be referable to a species of *Reticulatia*.

*Prorichthofenia*.—All of the citations of this genus must be referred to other names because of the uncertainty of the status of *Prorichthofenia* as a genus (see Part III, page 939). We qualify this genus and its species only for cases in which we are sure of the change.

*Pugnoides bidentatus* (GIRTY).—This is a small species that we were unable to identify in the Glass Mountains. In the absence of interior details it is impossible properly to place King's citations.

*Pugnoides pinguis* (GIRTY).—This is a large species from the Bell Canyon Formation and all citations of it in the Glass Mountains are below this level. We are unable to assess most of the records of it in King's lists; thus such records are unqualified.

#### 1. SKINNER RANCH FORMATION

- Aulosteges magnicostatus* Girty
- A. medlicottianus* Waagen
- Camarophoria venusta* Girty
- Composita mexicana* (Hall)
- Enteleterium bonum* King [doubtful]
- Linoproductus cora angustus* King
- Prorichthofenia likharewi* King
- Rhipidomella hessensis* King
- Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?
- Striatifera pinniformis* (Girty) = *Compressoproductus* sp.

## 2. LENOX HILLS FORMATION

*Linoproductus cora* (d'Orbigny) = *L. sp.*?  
*Orthotetella wolfcampensis* King?  
*Productus wolfcampensis* King? = *Limbella wolfcampensis* (King)

## 3. SKINNER RANCH FORMATION

*Chonetes subliratus* Girty = *Dyoros (Dyoros) sp.*?  
*Composita subtilita* (Hall)  
*Enteleles liumbonus* King [doubtful]  
*Marginifera cristobalensis* Girty = *Oncosarina sp.*?  
*M. reticulata* King = *Spyridiophora reticulata* (King)  
*Prorichthofenia likharewi* King  
*Rhipidomella hessensis* King  
 \**Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant  
*Waagenuconcha montpelierensis* (Girty) [doubtful]

## 4. SKINNER RANCH FORMATION

*Aulosteges magnicostatus* Girty  
*A. medlicottianus* Waagen  
*Camarophoria venusta* Girty  
*Composita subtilita* (Hall)  
*Derbyia nasuta* Girty  
*Hustedia meekana* (Shumard)  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera manzanica* Girty = *Oncosarina spinicostata* Cooper and Grant  
*M. reticulata* King = *Spyridiophora reticulata* (King)  
*M. r. angusta* King = *Glyptosteges angustus* (King)  
*M. sublaevis* King [doubtful]  
*Meekella difficilis* Girty  
*Productus ivesi* Newberry = *Peniculauris sp.*?  
 \**P. leonardensis* King [immature-doubtful]  
*Prorichthofenia likharewi* King = *Hercosia sp.*?  
*Pugnoides bidentatus* (Girty)  
*Rhipidomella transversa* King = *Acosarina sp.*?  
 \**Scacchinella gigantea* Schellwien [not *Scacchinella*] = ?  
*Spiriferina hilli* Girty = *Paraspiriferina sp.*?

## 5. CATHEDRAL MOUNTAIN FORMATION

*Meekella attenuata* Girty  
*Neospirifer mexicanus latus* King = *Cartorhium latum* (King)

## 6. ROAD CANYON FORMATION (LOWER)

*Chonetes permianus* Shumard [doubtful]  
*Hustedia mormoni papillata* (Shumard) [doubtful]  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera popei* (Shumard) [doubtful]  
*Martinia rhomboidalis* Girty  
*Meekella skenoides* Girty  
*Neospirifer pseudocameratus* (Girty)  
*Productus multistriatus* Meek = *Yakovlevia sp.*?  
*Rhynchopora taylori* Girty = *Rhynchopora sp.*?

## 7. CATHEDRAL MOUNTAIN FORMATION

*Composita subtilita* (Hall)  
*Hustedia meekana* (Shumard)

*Lyttonia hortonii* King = *Coscinophora hortonii* (King)  
*Marginifera cristobalensis* Girty = *Oncosarina sp.*?  
*Neospirifer bakeri* King [doubtful]  
*Productus ivesi* Newberry = *Peniculauris sp.*?  
*P. leonardensis* King = *Institella leonardensis* (King)  
*P. occidentalis* Newberry = *Rugatia sp.*?  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris sp.*?  
*Uncinuloides guadalupensis* (Shumard) = *Torynechus sp.*?

## 8. SKINNER RANCH FORMATION AND CATHEDRAL MOUNTAIN FORMATION [mixture]

*Aulosteges magnicostatus* Girty  
*A. triangularis* King = *Agelesia triangularis* (King)  
*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*Composita subtilita* (Hall)  
*Derbyia nasuta* Girty  
*Enteleles liumbonus* King [doubtful]  
*E. plummeri* King  
*Hustedia meekana* (Shumard)  
*Linoproductus waagenianus* (Girty) = *Megousia sp.*?  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*Martinia rhomboidalis* Girty  
*Meekella grandis* King = *M. occidentalis* (Newberry)  
*Neospirifer mexicanus latus* (King) = *Cartorhium latum* (King)  
*N. pseudocameratus* (Girty)  
*Productus leonardensis* King = *Institella leonardensis* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Rhipidomella hessensis* King  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris sp.*?  
*Striatifera pinniformis* (Girty) = *Compressoproductus sp.*?

## 9. CATHEDRAL MOUNTAIN FORMATION

*Aulosteges triangularis* King = *Agelesia triangularis* (King)  
*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*Composita subtilita* (Hall)  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera manzanica* Girty  
*Martinia rhomboidalis* Girty  
*Meekella grandis* King = *M. sp.*?  
*Productus ivesi* Newberry = *Peniculauris sp.*?  
 \**P. leonardensis* King = *Institella leonardensis* (King)  
*P. schucherti* King = *Xestosia schucherti* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)

*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?

10. CATHEDRAL MOUNTAIN FORMATION

*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*Composita subtilita* (Hall)  
*Lyttonia nobilis americanus* (Girty)  
*Martinia rhomboidalis* Girty  
*Meekella grandis* King = *M. sp.*?  
 \**Productus leonardensis* King = *Institella leonardensis* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?

11. CATHEDRAL MOUNTAIN FORMATION

*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*Composita subtilita* (Hall)  
*Lyttonia nobilis americanus* (Girty)  
*Martinia rhomboidalis* Girty  
*Meekella grandis* King = *M. sp.*?  
 \**Productus leonardensis* King = *Institella leonardensis* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?

12. CATHEDRAL MOUNTAIN FORMATION

*Ambocoelia guadalupensis* Girty = *Crinithyris* sp.?  
*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*C. subliatus* Girty [doubtful]  
*Composita subtilita* (Hall)  
*Hustedia meekana* (Shumard)  
*Linoproductus waagenianus* (Girty) = *Megousia* sp.?  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*M. reticulata angusta* King [doubtful]  
*M. sublaevis* King = *Anemonaria sublaevis* (King)  
*Martinia rhomboidalis* Girty  
*Meekella attenuata* Girty  
*M. grandis* King = *M. sp.*?  
*Neospirifer mexicanus latus* King = *Cartorhium latum* (King)  
*Productus leonardensis* King = *Institella leonardensis* (King)  
*P. schucherti* King = *Xestosia schucherti* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Pugnoides bidentatus* (Girty)  
*Rhipidomella leonardensis* King = *Acosarina mesoplatys* (King)

*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?

13. CATHEDRAL MOUNTAIN FORMATION

*Camarophoria venusta* Girty = *Stenosisma triquetrum* Cooper and Grant  
*Chonetes permianus* Shumard [doubtful]  
*Composita mira* (Girty) [doubtful]  
*C. subtilita* (Hall)  
*Linoproductus girtyi* King = *Megousia* sp.?  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*Martinia rhomboidalis* Girty  
*Meekella difficilis* Girty  
*M. grandis* King = *M. sp.*?  
 \**Productus leonardensis* King = *Institella leonardensis* (King)  
*P. schucherti* King = *Xestosia schucherti* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?  
*Waagenoconcha montpelierensis* (Girty) = *W. sp.*?

14. CATHEDRAL MOUNTAIN FORMATION

*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*Composita subtilita* (Hall)  
*Lyttonia nobilis americanus* (Girty)  
*Martinia rhomboidalis* Girty  
*Meekella attenuata* Girty  
*M. grandis* King = *M. sp.*?  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?

15. SKINNER RANCH AND CATHEDRAL MOUNTAIN FORMATIONS [mixed]

*Aulosteges medlicottianus* Waagen  
*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*Composita subtilita* (Hall)  
*Hustedia meekana* (Shumard)  
*Linoproductus cora angustus* King = *L. angustus* King  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera manzanica* Girty  
*M. popei* (Shumard) [doubtful]  
*M. reticulata angusta* King [doubtful]  
*Meekella difficilis* Girty  
*Neospirifer pseudocameratus* (Girty)  
 \**Parakeyserlingina fredericksi* King = *Skeletonia crassa* Cooper and Grant  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
*P. leonardensis* King = *Institella leonardensis* (King)  
*Pugnoides elegans* (Girty) [doubtful]  
*Rhipidomella hessensis* King

*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?  
*Waagenoconcha leonardensis* King = *Rhamnaria leonardensis* (King)

16. SKINNER RANCH FORMATION

*Camarophoria venusta* Girty  
*Chonetes sublratus* Girty [doubtful]  
*Composita subtilita* (Hall)  
*Enteleles leonardensis* King [doubtful]  
*Linoproductus girtyi* King = *Megousia* sp.?  
*Marginifera cristobalensis* Girty = *Oncosarina* sp.?  
*M. reticulata* King = *Spyridiophora reticulata* (King)  
*Martinia rhomboidalis* Girty  
*Prorichthofenia likharwei* King = *Hercosia* sp.?  
*Pugnoides bidentatus* (Girty)  
*Striatifera pinniformis* (Girty) = *Compressoproductus* sp.?  
 \**Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant

This location is not in accordance with that given on R. E. King's map. The map location is near the base of the hill, at the west end, 0.9 mi S 6° W of the top of hill 5021, which is the third hill west of Iron Mountain. The faunal list suggests the same level as that at King's locality 3 which is on the line of section 15 or very close to it, probably at the top of the Skinner Ranch Formation.

17. SKINNER RANCH FORMATION (SULLIVAN PEAK MEMBER)  
 = USNM 707

*Enteleles liumbonus* King  
*Geyerella americana* Girty = *G. hessi* Cooper and Grant  
*Meekella hessensis* King  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
*Streptorhynchus undulatum* King = *Tropidelasma undulatum* (King)

17a. SKINNER RANCH FORMATION (SULLIVAN PEAK MEMBER)  
 = USNM 707

*Hustedia meekana* (Shumard)  
*Linoproductus waagenianus* (Girty) = *Megousia* sp.?  
*Marginifera? whitei* King = *Oncosarina* sp.?  
*Rhipidomella transversa* King = *Acosarina mesoplatys* (King)  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant

17b. SKINNER RANCH FORMATION (SULLIVAN PEAK MEMBER)

*Lyttonia hortonii* King = *Coscinophora* sp.?  
*Prorichthofenia likharewi* King = ?  
*Pugnoides pinguis* (Girty) = *Antronaria* sp.?

17c. SKINNER RANCH FORMATION (SULLIVAN PEAK MEMBER)

*Pugnoides pinguis* (Girty) = *Antronaria* sp.?

19. SKINNER RANCH FORMATION (POPLAR TANK MEMBER)

*Composita subtilita* (Hall)  
*Hustedia meekana* (Shumard)  
 \**Parakeyserlingina fredericki* King = *Eolyttonia* sp.?

20. SKINNER RANCH FORMATION (POPLAR TANK MEMBER)

*Chonetes sublratus* Girty = *Dyoros* sp.?  
*Composita subtilita* (Hall)  
*Marginifera manzanica* Girty = *Oncosarina* sp.  
*M. wabashensis* (Norwood and Pratten) [doubtful]  
*Meekella difficilis* Girty  
*Prorichthofenia uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Rhipidomella mesoplatys* King = *Acosarina* sp.?

21. CATHEDRAL MOUNTAIN FORMATION (THIRD AND FOURTH LIMESTONE MEMBERS)

*Composita mira* (Girty) [doubtful]  
*Marginifera cristobalensis* Girty  
*M. manzanica* Girty  
*Martinia rhomboidalis* Girty  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
*P. leonardensis* King [doubtful]  
*Prorichthofenia uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Striatifera pinniformis* (Girty) = *Compressoproductus* sp.?

22. CATHEDRAL MOUNTAIN FORMATION

*Camarophoria venusta* Girty  
*Meekella attenuata* Girty  
*M. difficilis* Girty  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
*Waagenoconcha leonardensis* King = *Rhamnaria leonardensis* (King)

23. CATHEDRAL MOUNTAIN FORMATION

*Aulosleges medlicottianus* Waagen  
*Composita subtilita* (Hall)  
*Linoproductus girtyi* King = *Megousia* sp.?  
*Marginifera cristobalensis* Girty  
*Prorichthofenia likharewi* King = ?

24. SKINNER RANCH FORMATION

*Composita subtilita* (Hall)  
*Linoproductus girtyi* King = *Megousia* sp.?  
*Lyttonia nobilis americanus* (Girty)  
 \**Marginifera manzanica* Girty = *Oncosarina* sp.  
 \**M. reticulata* King = *Spyridiophora reticulata* (King)  
*M. r. angusta* King = *Glyptosteges angustus* (King)  
*Meekella attenuata* Girty  
*M. difficilis* Girty  
*Neospirifer costella* King = *Lepidospirifer costellus* (King)  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
*Prorichthofenia uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Pugnoides bidentatus* (Girty)

- Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?  
 \**Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
25. CATHEDRAL MOUNTAIN FORMATION  
*Ambocoelia guadalupensis* Girty = *Crurithyris* sp.?  
*Aulosteges magnicostatus* Girty  
*Hustedia meekana* (Shumard)  
*Linoproductus waagenianus* (Girty) = *Megousia* sp.?  
*Pugnoides bidentatus* (Girty)
26. CATHEDRAL MOUNTAIN FORMATION  
*Aulosteges magnicostatus* Girty  
*Camarophoria venusta* Girty  
*Hustedia meekana* (Shumard)  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*Neospirifer pseudocameratus* (Girty)  
*Pugnoides pinguis* (Girty)
- 26s. CATHEDRAL MOUNTAIN FORMATION  
*Aulosteges magnicostatus* Girty  
*Buxtonia victorioensis* King = *Kochiproductus* sp.?  
*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*Composita subtilita* (Hall)  
*Enteleles leonardensis* King  
*Marginifera manzanica* Girty  
*M. reticulata* King = *Spyridiophora reticulata* (King)  
*M. r. angusta* King = *Glyptosteges angustus* (King)  
*Martinia rhomboidalis* Girty  
*Meekella difficilis* Girty  
*Neospirifer mexicanus latus* King = *Cartorhium latum* (King)  
*N. pseudocameratus* (Girty)  
*Prorichthofenia likharewi* King = *Hercosia* sp.?  
*Pugnoides bidentatus* (Girty)  
*Rhipidomella leonardensis* = *Acosarina mesoplatys* (King)  
*R. mesoplatys* King = *Acosarina mesoplatys* (King)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?  
*Streptorhynchus pygmaeum* Girty [doubtful]  
*Striatifera pinniformis* (Girty) = *Compressoproductus* sp.?
27. CATHEDRAL MOUNTAIN FORMATION  
*Aulosteges magnicostatus* Girty  
*Marginifera manzanica* Girty  
*Meekella difficilis* Girty
28. CATHEDRAL MOUNTAIN FORMATION  
*Aulosteges magnicostatus* Girty  
*Enteleles leonardensis* King
29. CATHEDRAL MOUNTAIN FORMATION  
*Aulosteges magnicostatus* Girty
30. CATHEDRAL MOUNTAIN FORMATION  
*Camarophoria venusta* Girty  
*Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
31. CATHEDRAL MOUNTAIN FORMATION = USNM 710f  
*Ambocoelia guadalupensis* Girty = *Crurithyris* sp.?  
*Aulosteges magnicostatus* Girty  
*Avonia subhorrida rugatula* (Girty) = *Echinauris* sp.?  
*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*C. subliratus* Girty [doubtful]  
*Composita subtilita* (Hall)  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*Meekella attenuata* Girty  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
 \**P. leonardensis* King = ?  
 \**P. schucherti* King = ?  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
32. ROAD CANYON FORMATION  
*Lyttonia nobilis americanus* (Girty)
33. [Formation uncertain]  
*Lyttonia nobilis americanus* (Girty)
34. [Formation uncertain]  
*Martinia rhomboidalis* Girty  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Striatifera pinniformis* (Girty) = *Compressoproductus* sp.?
35. SKINNER RANCH FORMATION (DECIE RANCH MEMBER) = part of USNM 707a  
*Aulosteges magnicostatus* Girty  
*Composita subtilita* (Hall)  
*Euteletes dumblei* Girty = *E. rotundobesus* Cooper and Grant  
*Geyerella americana* Girty = *G. hessi* Cooper and Grant  
*Marginifera cristobalensis* Girty = *Oncosarina rotundata* Cooper and Grant  
*M. manzanica* Girty = *Oncosarina* sp.  
*Meekella attenuata* Girty = *M. hessensis* (King)  
*Prorichthofenia likharewi* King = *Cyclacantharia gigantea* Cooper and Grant  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant
37. CATHEDRAL MOUNTAIN FORMATION  
 \**Aulosteges triangularis* King = *Agelesia triangularis* (King)  
*Composita subtilita* (Hall)  
*Enteleles leonardensis* King



- Hustedia meekana* (Shumard)  
*Linoproductus girtyi* King = *Megousia* sp.?  
*L. waagenianus* (Girty) = *Megousia* sp.?  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*M. manzanica* Girty  
*Meekella attenuata* Girty  
*Neospirifer pseudocameratus* (Girty)  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
 \**P. leonardensis* King = probably *Institella*  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Striatifera pinniformis* (Girty) = *Compressoproductus thomasi* Cooper and Grant  
*Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
38. SKINNER RANCH FORMATION AND CATHEDRAL MOUNTAIN FORMATION [mixed] = approximately USNM 708e  
*Aulosteges magnicostatus* Girty  
*A. medlicottianus* Waagen  
*Composita subtilita* (Hall)  
*Derbyia nasuta* Girty  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera manzanica* Girty  
*M. popei* (Shumard) [doubtful]  
*M. reticulata angusta* King [doubtful]  
*Meekella difficilis* Girty  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
 \**P. schucherti* King = *Xestosia* sp.?  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Pugnoides bidentatus* (Girty)  
*Striatifera pinniformis* (Girty) = *Compressoproductus* sp.?  
*Waagenoconcha leonardensis* King = *Rhamnaria leonardensis* (King)
39. SKINNER RANCH FORMATION (DECIE RANCH MEMBER) = approximately USNM 727u  
*Derbyia nasuta* Girty  
*Linoproductus waagenianus* (Girty) = *Megousia* sp.?  
*Marginifera reticulata angusta* King = *Glyptosteges angustus* (King)?  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
*Prorichthofenia likharewi* King = *Hercosia* sp.?
42. CAPITAN FORMATION (ALTUDA MEMBER)  
*Hustedia meekana* (Shumard) [doubtful]
43. CAPITAN FORMATION (ALTUDA MEMBER)  
*Composita emarginata affinis* Girty  
*Hustedia meekana* (Shumard)  
*Marginifera popei* (Shumard)  
*Martinia rhomboidalis* Girty  
*Punctospirifer billingsi* (Shumard)
44. ROAD CANYON FORMATION = approximately USNM 731v  
*Aulosteges medlicottianus* Waagen = *Edriosteges multispinosus* Muir-Wood and Cooper  
*Avonia subhorrida rugatula* (Girty) = *Costispinifera rugatula* (Girty)  
*Camarophoria venusta* Girty  
*Chonetes subliratus* Girty [doubtful]  
*Composita mira* (Girty) [doubtful]  
*Hustedia meekana* (Shumard)  
*H. pusilla* (Girty) [doubtful]  
*Meekella skenoides* Girty  
*Neospirifer pseudocameratus* (Girty)  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?
45. ROAD CANYON FORMATION  
*Camarophoria venusta* Girty = *Stenoscisma* sp.?  
*Composita mira* (Girty) [doubtful]  
*Hustedia meekana* (Shumard)  
*H. pusilla* (Girty) [doubtful]  
*Linoproductus waagenianus* (Girty) = *Megousia* sp.?  
*Meekella skenoides* Girty  
*Neospirifer pseudocameratus* (Girty) = *N. bakeri* King  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?
46. ROAD CANYON FORMATION = USNM 707e  
*Aulosteges medlicottianus* Waagen = *Edriosteges multispinosus* Muir-Wood and Cooper  
*Avonia? incurvata* King = *Rugatia incurvata* (King)  
*A. subhorrida rugatula* (Girty) = *Costispinifera rugatula* (Girty)  
*A. walcottiana* (Girty) = *Echinauris* sp.?  
*Camarophoria venusta* Girty  
*Cancrinella phosphatica* (Girty) [doubtful]  
*Chonetes subliratus* Girty = *Dyoros (Dyoros)* sp.?  
*Composita mira* (Girty) [doubtful]  
*Derbyia nasuta* Girty  
*Dielasma spatulatum* Girty [doubtful]  
*Hustedia meekana* (Shumard)  
*H. mormoni papillata* (Shumard) [doubtful]  
*H. pusilla* (Girty) [doubtful]  
*Linoproductus waagenianus* (Girty) = *Megousia auriculata* Muir-Wood and Cooper  
*Marginifera popei* (Shumard) = *Liosotella costata* Cooper and Grant  
*Meekella attenuata* Girty  
*M. skenoides* Girty = *M. calathica* Cooper and Grant  
*Neospirifer bakeri* King = *N. bakeri bakeri* King  
*N. pseudocameratus* (Girty) = *N. bakeri* King  
*Productus dartoni sullivanensis* King = *Kutorginella sullivanensis* (King)  
*P. indicus* Waagen = *Rugatia mckeei* Cooper and Grant  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?  
*Rhynchopora taylori* Girty = *R. sphenoides* Cooper and Grant

- Spiriferina laxa* Girty = *Metriolepis* sp.?  
*Squamularia guadalupensis* (Shumard) = *Neophricadotheryris cordata* Cooper and Grant
47. WORD FORMATION (WILLIS RANCH MEMBER)  
*Composita emarginata affinis* Girty [doubtful]  
*Derbyia nasuta* Girty  
*Neospirifer pseudocameratus* (Girty) = *N. amphigyus* Cooper and Grant
48. WORD FORMATION (WILLIS RANCH MEMBER)  
*Lyttonia nobilis americanus* (Girty)  
 \**Productus leonardensis* King = *Institella leonardensis* (King)
50. CAPITAN FORMATION  
*Avonia subhorrida rugatula* (Girty) = *Costispiniifera rugatula* (Girty)  
*Composita emarginata affinis* Girty [doubtful]  
*Hustedia meekana* (Shumard)  
*Marginifera opima* (Girty) [doubtful]  
*Punctospirifer billingsi* (Shumard) [doubtful]
51. ROAD CANYON FORMATION = near USNM 724a  
*Composita mira* (Girty) [doubtful]  
*Hustedia meekana* (Shumard)  
*H. pusilla* (Girty) [doubtful]  
*Lyttonia nobilis americanus* (Girty)  
*Meekella attenuata* Girty  
 \**Uncinuloides guadalupensis* (Shumard) = *Rhynchopora* sp.?
53. ROAD CANYON FORMATION = USNM 710m  
*Aulosteges beedei* King = *Echinosteges tuberculatus* (King)  
*Hustedia pusilla* (Girty) [doubtful]
54. ROAD CANYON FORMATION  
*Avonia subhorrida rugatula* (Girty) = *Costispiniifera rugatula* (Girty)  
*Chonetes subliratus* Girty  
*Composita mira* (Girty) [doubtful]  
*Derbyia? crenulata* Girty [doubtful]  
*Hustedia meekana* (Shumard)  
*H. mormoni papillata* (Shumard) [doubtful]  
*H. pusilla* (Girty) [doubtful]  
*Linoproductus girtyi* King = *Megousia* sp.?  
*L. waagenianus* (Girty) = *Megousia auriculata* Muir-Wood and Cooper  
*Lyttonia nobilis americanus* (Girty)  
*L. horti* King = *Coscinophora magnifica* Cooper and Grant  
*Marginifera opima* (Girty) [doubtful]  
*M. popei* (Shumard) [doubtful]  
*Meekella attenuata* Girty  
*Neospirifer pseudocameratus* (Girty) = *N. bakeri* King  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?  
*Punctospirifer billingsi* (Shumard) [doubtful]
- Rhynchopora taylori* Girty = *R. sphenoides* Cooper and Grant  
*Rhipidomella mesoplatys* King [doubtful]  
*Squamularia guadalupensis* (Shumard) = *Neophricadotheryris cordata* Cooper and Grant  
 \**Uncinuloides guadalupensis* (Shumard) = *Rhynchopora* sp.?
55. WORD FORMATION (UPPER)  
*Avonia walcottiana costata* King? = *Costispiniifera* sp.?  
*Composita persinuata* (Meek) [doubtful]  
*Derbyia nasuta* Girty  
*Hustedia meekana* (Shumard)  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera popei* (Shumard) = *Liosotella* sp.?  
*Meekella attenuata* Girty  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?
57. CAPITAN FORMATION (ALTUDA MEMBER) = USNM 718a.  
*Camarophoria? indentata* (Shumard) [doubtful]  
*Lyttonia nobilis americanus* (Girty)  
*Martinia rhomboidalis* Girty  
*Squamularia guadalupensis* (Shumard)
58. ROAD CANYON FORMATION  
*Aulosteges guadalupensis* Shumard = *Rhamnaria* sp.?  
*Lyttonia nobilis americanus* (Girty)  
*Neospirifer bakeri* King  
*N. pseudocameratus* (Girty) = *N. bakeri* King  
*Productus indicus* Waagen = *Rugalia mckeei* Cooper and Grant
70. LENOX HILLS FORMATION = USNM 708n  
*Aulosteges medlicottianus* Waagen = *Limbella wolfcampensis* (King)  
*Meekella irregularis texana* King = *M. texana* King
71. SKINNER RANCH FORMATION (DECIE RANCH MEMBER) = USNM 707g, 707v  
*Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)  
*Orthotetina* cf. *Orthotetes mutabilis* Girty? = young *Geyerella* sp.?  
 \**Parakeyserlingina fredericki* King = *Eolyttonia* sp.?  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant  
*Teguliferina bösei* King = *Acritosia* sp.?
75. GAPTANK FORMATION  
*Buxtonia occidentalis* King = *Kochiproductus occidentalis* (King)  
*Chonetes verneuillianus* Norwood and Pratten [doubtful]  
*Hustedia mormoui* (Marcou)  
*Linoproductus (Cancrinella) villiersi* (d'Orbigny) = *Cancrinella* sp.?  
*L. cora* (d'Orbigny) = *L.* sp.?

- Marginifera wabashensis* (Norwood and Pratten) = *Hystriulina* sp.?
- \**Martinia wolfcampensis* King = *Composita* sp.?
- Meekella attenuata* Girty
- Neospirifer triplicatus* (Hall)
- Orthotetina* cf. *Orthotetes mutabilis* Girty = ?
- Rhipidomella carbonaria* (Swallow) = *R.* sp.?
76. LENOX HILLS FORMATION
- Camarophoria venusta* Girty
77. LENOX HILLS FORMATION
- Martinia rhomboidalis* Girty
- Neospirifer triplicatus* (Hall)
82. CATHEDRAL MOUNTAIN FORMATION
- Camarophoria venusta* Girty
- Chonetes subliratus* Girty
- Composita subtilita* (Hall)
- Hustedia meekana* (Shumard)
- Marginifera cristobalensis* Girty
- M. sublaevis* King = *Anemonaria sublaevis* (King)
- \**Productus leonardensis* King = *Institella leonardensis* (King)
- Rhipidomella leonardensis* King = *Acosarina* sp.?
- Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
83. CATHEDRAL MOUNTAIN FORMATION
- Leonard:
- \**Aulosteges triangularis* King = [not this species = ?]
- Chonetes subliratus* Girty
- Composita subtilita* (Hall)
- Linoproductus waagenianus* (Girty) = *Megousia* sp.?
- Marginifera cristobalensis* Girty
- M. sublaevis* King = *Anemonaria sublaevis* (King)
- Productus ivesi* Newberry = *Peniculauris* sp.?
- \**P. leonardensis* King = *Institella leonardensis* (King)
- Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)
- Streptorhynchus lamellatum* King = *Diplanus lamellatus* (King)
- \**Uncinuloides guadalupensis* (Shumard) = *Rhynchopora* sp.?
- Waagenoconcha leonardensis* King = *Rhamnaria leonardensis* (King)
- Wolfcamp:
- Hustedia meekana* (Shumard)
- Productus wolfcampensis* King = *Limbella wolfcampensis* (King)
- Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
85. LENOX HILLS FORMATION
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)
- Geyerella americana* Girty = *G. kingorum* Cooper and Grant
- Orthotetella wolfcampensis* King
- Spirifer condor* d'Orbigny = *Gypospirifer anancites* Cooper and Grant
- Teguliferina bösei* King = *T. boesei* King
86. LENOX HILLS FORMATION
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)
- Rhipidomella carbonaria* (Swallow) = *R.* sp.?
87. NEAL RANCH FORMATION = USNM 701d
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)
- Avonia boulei* (Kozłowski) = *Echinauris interrupta* Cooper and Grant
- Chonetes verneuillianus* Norwood and Pratten [doubtful]
- Hustedia mormoni* (Marcou)
- Linoproductus cora* (d'Orbigny) = *L.* sp.?
- Martinia wolfcampensis* King
- Meekella striatocostata* (Cox) = *M. priouota* Cooper and Grant
- Neospirifer triplicatus* (Hall)
- Orthotetella wolfcampensis* King
- Parakeyserlingina fredericki* King = *Eolyttonia* sp.?
- Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?
- Rhipidomella carbonaria* (Swallow) = *R.* sp.?
- Strophalosia hystriacula* Girty [doubtful]
- Teguliferina bösei* King = *T. boesei* King
88. CAPTANK FORMATION (Uddenites-BEARING SHALE MEMBER)
- Ambocoelia planoconvexa* (Shumard) = *Crurithyris tumibilis* Cooper and Grant
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)
- Chonetes granulifer* Owen = *Neochonetes* sp.?
- Composita subtilita* (Hall)
- Hustedia mormoni* (Marcou)
- Linoproductus* (*Cancrinella*) *villiersi* (d'Orbigny) = *Cancrinella* sp.?
- Marginifera capaci* (d'Orbigny) = *Kozłowski* sp.?
- M. lasallensis* (Worthen) = *Kutorginella uddeni* Cooper and Grant
- Martinia wolfcampensis* King
- Meekella irregularis texana* King = *M. texana* King
- Neospirifer triplicatus* (Hall)
- N. texanus* (Meek) = *Eridmatus marathonensis* Cooper and Grant
- Orthotetella wolfcampensis* King
- Overtonia cristato-tuberculata* (Kozłowski)? = *Fimbrinia plummeri* (R. H. King)
- Parenteletes cooperi* King
- Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?
- Pustula semipunctata* (Shepard) = *Echinaria* sp.?
- Rhipidomella carbonaria* (Swallow) = *R.* sp.?
- Spirifer condor* d'Orbigny = *Gypospirifer* sp.?
- Streptorhynchus pyramidale* King = *Chelononia straminea* Cooper and Grant
- Teguliferina bösei* King = *T. boesei* King

- 88s. GAPTANK FORMATION (*Uddenites*-BEARING SHALE MEMBER) = approximately USNM 701p

Wolfcamp: *Uddenites* zone at Wolfcamp

*Ambocoelia planoconvexa* (Shumard) = *Crurithyris tumibilis* Cooper and Grant

*Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)

*Chonetes granulifer* Owen = *Neochonetes* sp.?

*Linoproductus cora* (d'Orbigny) = *L.* sp.?

*Marginifera lasallensis* (Worthen) = *Kutorginella uddeni* Cooper and Grant

*M. capaci* (d'Orbigny) [doubtful]

*M. wabashensis* (Norwood and Pratten) = *Hystriculina* sp.?

*Martinia wolfcampensis* King

*Meekella irregularis texana* King = *M. texana* King

*Neospirifer triplicatus* (Hall) = *N.* sp.

*Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?

*P. semistriatus* Meek = *Nudauris reticulata* Cooper and Grant

*Pustula semipunctata* (Shepard) = *Echinaria* sp.?

*Rhynchopora illinoisensis* (Worthen) = *R. molina* Cooper and Grant

*Spirifer* (*Neospirifer*) *texanus* (Meek) = *Eridmatus marathonensis* Cooper and Grant

*Squamularia perplexa* (McChesney) = *Neophricadothyris transversa* Cooper and Grant

#### 89. NEAL RANCH FORMATION

*Chonetes granulifer* Owen = *Neochonetes* sp.?

*Composita subtilita* (Hall)

*Hustedia mormoni* (Marcou)

*Marginifera wabashensis* (Norwood and Pratten) = *Hystriculina* sp.?

*Neospirifer triplicatus* (Hall)

*N. texanus* (Meek) = *Eridmatus marathonensis* Cooper and Grant

*Orthotetella wolfcampensis* King

*Parenteletes cooperi* King

*Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?

*Punctospirifer kentuckyensis* (Shumard) = *Reticulariina* sp.?

#### 90. NEAL RANCH FORMATION

*Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)

*Composita subtilita* (Hall)

*Hustedia mormoni* (Marcou)

*Linoproductus cora* (d'Orbigny) = *L.* sp.?

*Meekella grandis* King = *M. magnifica* Cooper and Grant

*M. irregularis texana* King = *M. texana* King

*Orthotetella wolfcampensis* King

*Orthotichia kozlowskii* King

*Productus semistriatus* Meek = *Nudauris* sp.?

*Rhipidomella carbonaria* (Swallow) = *R.* sp.?

*Rhynchopora illinoisensis* (Worthen) = *R. molina* Cooper and Grant

*Squamularia perplexa* (McChesney) = *Neophricadothyris transversa* Cooper and Grant

*Teguliferina bösei* King = *T. boesei* King

#### 91. NEAL RANCH FORMATION

*Buxtonia occidentalis* King = *Kochiproductus occidentalis* (King)

*Chonetes spinoliratus* King = *Chonetinella spinolirata* (King)

*Derbyia buchi* (d'Orbigny) = *D. carteri* Cooper and Grant

*Dielasma bovidens* (Morton) = *Beecheria* sp.?

*Hustedia mormoni* (Marcou)

*Marginifera capaci* (d'Orbigny) = *Kozlowskia* sp.?

*Neospirifer triplicatus* (Hall)

*N. texanus* (Meek) = *Eridmatus marathonensis* Cooper and Grant

*Orthotetina* cf. *Orthotetes mutabilis* Girty = *Geyerella kingorum* Cooper and Grant

*Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?

#### 92. NEAL RANCH FORMATION = USNM 701c

*Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)

*Chonetes spinoliratus* King = *Chonetinella spinolirata* (King)

*Composita subtilita* (Hall)

*Linoproductus cora* (d'Orbigny) = *L.* sp.?

*Marginifera capaci* (d'Orbigny) = *Kozlowskia* sp.?

*Meekella irregularis texana* King = *M. texana* King

*Neospirifer texanus* (Meek) = *Eridmatus marathonensis* Cooper and Grant

*Orthotetella wolfcampensis* King

*Orthotichia kozlowskii* King

*Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?

*P. semistriatus* Meek = *Nudauris reticulata* Cooper and Grant

#### 93. NEAL RANCH FORMATION

*Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)

*Avonia boulei* (Kozlowski) = *Echinauris interrupta* Cooper and Grant

*Buxtonia occidentalis* King = *Kochiproductus occidentalis* (King)

*Camarophoria theveneni* Kozlowski = *Stenosisma* sp.?

*Composita subtilita* (Hall)

*Derbyia buchi* (d'Orbigny) = *D. carteri* Cooper and Grant

*Enteleles dumblei* Girty [doubtful]

*E. wolfcampensis* King

*Hustedia mormoni* (Marcou) = *H. trita* Cooper and Grant

*Linoproductus cora* (d'Orbigny) = *L.* sp.?

*Marginifera capaci* (d'Orbigny) = *Kozlowskia* sp.?

*Martinia wolfcampensis* King

- Meekella irregularis texana* King = *M. texana* King  
*M. striatocostata* (Cox) = *M. prionota* Cooper and Grant  
*Neospirifer triplicatus* (Hall)  
*Orthotetella wolfcampensis* King  
*Parakeyserlingina fredericki* King = *Eolyttonia* sp.  
*Productus graciosus occidentalis* Schellwien = *Spyridiophora distincta* Cooper and Stehli  
*P. semireticulatus hermosanus* Girty = *Reticulatia* sp.  
*P. semistriatus* Meek? = *Nudauris splendens* Cooper and Grant  
*Rhipidomella carbonaria* (Swallow) = *R.* sp.  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.  
*Streptorhynchus pyramidale* King = *Chelononia straminea* Cooper and Grant  
*Teguliferina bösei* King = *T. boesei* King
- 93s. NEAL RANCH FORMATION
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)  
*Avonia boulei* (Kozlowski) = *Echinauris interrupta* Cooper and Grant  
*Derbyia buchi* (d'Orbigny) = *D. carteri* Cooper and Grant  
*Enteleles wolfcampensis* King  
*Linoproductus cora* (d'Orbigny) = *L.* sp.  
*Marginifera capaci* (d'Orbigny) = *Kozlowskia* sp.  
*Meekella irregularis texana* King = *M. texana* King  
*M. striatocostata* (Cox) = *M. prionota* Cooper and Grant  
*Neospirifer triplicatus* (Hall)  
*Productus semistriatus* Meek = *Nudauris* sp.  
*Pustula semipunctata* (Shepard) = *Echinaria* sp.  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris transversa* Cooper and Grant  
*Strophalosia hystricula* Girty = *Heteralosia?* sp.
94. GAPTANK FORMATION (Uddenites-BEARING SHALE MEMBER)
- Ambocoelia planoconvexa* (Shumard) = *Crurithyris tumibilis* Cooper and Grant  
*Aulosteges wolfcampensis* King = *Linoproductus* sp.  
*Camarophoria venusta* Girty  
*Chonetes verneuillanus* Norwood and Pratten = *Chonetinella* sp.  
*Hustedia mormoni* (Marcou)  
*Marginifera wabashensis* (Norwood and Pratten) = *Hystriculina* sp.  
*Martinia wolfcampensis* King  
*Meekella irregularis texana* = *M. texana* King  
*Neospirifer triplicatus* (Hall)  
*Overtonia cristato-tuberculata* (Kozlowski)? = *Fimbrinia plummeri* (R. H. King)  
*Parenteleles cooperi* King  
*Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.  
*P. semistriatus* Meek = *Nudauris splendens* Cooper and Grant
95. GAPTANK FORMATION (Uddenites-BEARING SHALE MEMBER) = USNM 721-1
- Avonia boulei* (Kozlowski) = *Echinauris interrupta* Cooper and Grant  
*Chonetes granulifer* Owen = *Neochonetes* sp.  
*Composita subtilita angusta* King  
*Dielasma bouldensis* (Morton) = *Beecheria* sp.  
*Marginifera lasallensis* (Worthen) = *Kutorginella uddeni* Cooper and Grant  
*M. wabashensis* (Norwood and Pratten) = *Hystriculina* sp.  
*Martinia wolfcampensis* King  
*Meekella irregularis texana* King = *M. texana* King  
*Orthotetella wolfcampensis* King  
*Parenteleles cooperi* King  
*Squamularia perplexa* (McChesney) = *Neophricadothyris transversa* Cooper and Grant  
*Teguliferina bösei* King = *T. boesei* King
96. NEAL RANCH FORMATION
- Martinia wolfcampensis* King
98. SKINNER RANCH FORMATION (DECIE RANCH MEMBER)
- Derbyia nasuta* Girty  
*Linoproductus cora angustus* King [doubtful]  
*Marginifera popei* (Shumard) [doubtful]  
*Martinia rhomboidalis* Girty  
*Meekella attenuata* Girty  
*Rhipidomella hessensis* King
100. SKINNER RANCH FORMATION (DECIE RANCH MEMBER)
- Composita subtilita* (Hall)
102. CATHEDRAL MOUNTAIN FORMATION
- Lyttonia nobilis americanus* (Girty)  
*Productus ivesi* Newberry = *Peniculauris* sp.  
*\*P. leonardensis* King = *Institella leonardensis* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Pustula semipunctata* (Shepard) [doubtful]
103. [Formation uncertain]
- Lyttonia nobilis americanus* (Girty)  
*Prorichthofenia likharewi* King = *Hercosia* sp.
104. CATHEDRAL MOUNTAIN FORMATION = USNM 713t
- Aulosteges magnicostatus* Girty  
*Camarophoria venusta* Girty = *Stenoscisma triquetrum* Cooper and Grant  
*Composita subtilita* (Hall)  
*Enteleles plummeri* King  
*\*Marginifera cristobalensis* Girty = *Echinauris irregularis* Cooper and Grant  
*M. manzanica* Girty  
*Meekella difficilis* Girty  
*Neospirifer huecoensis* King [doubtful]  
*N. mexicanus latus* (King) = *Cartorhium latum* (King)  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)



- \**P. leonardensis* King = *Institella leonardensis* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Pugnoides elegans* (Girty) [doubtful]  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris bullata* Cooper and Grant  
 \**Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
105. SKINNER RANCH FORMATION = approximately USNM 716s  
*Camarophoria venusta* Girty  
*Enteleles liumbonus* King [doubtful]  
*Hustedia hessensis* King  
*H. meekana* (Shumard)  
*Linoproductus cora angustus* King = *L. angustus* King  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*Meekella grandis* King = *M. enormis* Cooper and Grant  
*Productus iusei* Newberry = *Peniculauris* sp.?  
*Prorichthofenia teguliferoides* King = *Acritosia teguliferoides* (King)  
*Pugnoides texanus* (Shumard) [doubtful]  
*Rhipidomella hessensis* King  
*Streptorhynchus lamellatum* King = *Diplanus lamellatus* (King)  
*S. undulatum* King = *Tropidelasma* sp.?
106. SKINNER RANCH FORMATION  
*Camarophoria venusta* Girty  
*Composita subtilita* (Hall)  
*Enteleles liumbonus* King?  
*Hustedia hessensis* King  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera manzanica* Girty  
*M. sublaevis* King [doubtful]  
*Productus hessensis* King = *Antiquatonia hessensis* (King)  
*P. ivesi* Newberry = *Peniculauris* sp.?  
*Prorichthofenia likharewi* King [doubtful]  
*Pugnoides elegans* (Girty) [doubtful]  
*Rhipidomella hessensis* King  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant  
*Spiriferina angulata* King = *Crenispirifer angulatus* (King)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?
107. HESS FORMATION (TAYLOR RANCH MEMBER) = USNM 702d  
*Aulosteges medlicottianus* Waagen = *Edriosteges* sp.?  
*Camarophoria venusta* Girty = *Stenoscisma pyraustoides* Cooper and Grant  
*Chonetes hessensis* King = *Rugaria hessensis* (King)  
*Composita subtilita* (Hall)  
*Enteleles dumblei* Girty = *E. subcircularis* Cooper and Grant
- Hustedia meekana* (Shumard) = *H. cepacea* Cooper and Grant  
*Linoproductus cora angustus* King = *L. undatus* Cooper and Grant  
*Marginifera? whitei* King = *Oncosarina whitei* (King)  
*Meekella attenuata* Girty  
*Neospirifer huecoensis* King = *N. notialis* Cooper and Grant  
*Productus hessensis* King = *Thamnosia silicica* Cooper and Grant  
*P. ivesi* Newberry = *Peniculauris imitata* Cooper and Grant  
*P. semireticulatus hermosanus* Girty = *Peniculauris* sp.?  
*Prorichthofenia likharewi* King = *Hercosia* sp.?  
*Pugnoides transversus* King = *Antronaria transversa* (King)  
*Rhipidomella hessensis* King
108. HESS FORMATION (TAYLOR RANCH MEMBER) = USNM 702m  
*Aulosteges medlicottianus* Waagen = *Edriosteges* sp.?  
*Enteleles dumblei* Girty = *S. subcircularis* Cooper and Grant  
*Lyttonia nobilis americanus* (Girty)  
*Pugnoides elegans* (Girty) = *Antronaria speciosa* Cooper and Grant  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant
112. HESS FORMATION  
*Composita mexicana* (Hall) [doubtful]
113. LENOX HILLS FORMATION  
*Composita mexicana* (Hall) [doubtful]  
*Linoproductus cora angustus* King = *L. angustus* King  
*Productus ivesi* Newberry [doubtful]
117. HESS FORMATION  
*Prorichthofenia likharewi* King = ?
119. CATHEDRAL MOUNTAIN FORMATION  
*Composita subtilita* (Hall)  
*Derbyia nasuta* Girty  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
 \**P. leonardensis* King = *Institella leonardensis* (King)  
 \**P. schucherti* King = *Xestosia schucherti* (King)
120. CATHEDRAL MOUNTAIN FORMATION = approximately USNM 721u  
*Aulosteges magnicostatus* Girty = *Chonosteges variabilis* Cooper and Grant  
*A. medlicottianus* Waagen = *Edriosteges* sp.?  
*A. subcostatus* King = *Peniculauris subcostata* (King)  
*Camarophoria venusta* Girty = *Stenoscisma triquetrum* Cooper and Grant  
*Composita subtilita* (Hall)  
*Enteleles leonardensis* King  
*Hustedia meekana* (Shumard)

- Linoproductus cora angustus* King = *L. angustus* King  
*L. waagenianus* (Girty) = *Megousia* sp.?  
*Lyttonia nobilis americanus* (Girty)  
 \**Marginifera cristobalensis* Girty = *Echinauris irregularis* Cooper and Grant  
*M. sublaevis* King = *Anemonaria sublaevis* (King)  
*Martinia rhomboidalis* Girty = *M. miranda* Cooper and Grant  
*Meekella attenuata* Girty  
*M. difficilis* Girty  
*Neospirifer mexicanus latus* King = *Cartorhium latum* (King)  
*N. pseudocameratus* (Girty) = *N. mansuetus* Cooper and Grant  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
 \**P. leonardensis* King = *Institella leonardensis* (King)  
 \**P. schucherti* King = *Xestosia schucherti* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) (part) = *Hercosia cribrosa* Cooper and Grant  
*Pugnoides pinguis* (Girty) [doubtful]  
*P. bidentatus* (Girty)  
*Rhipidomella leonardensis* King = *Acosarina mesoplatys* (King)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris bullata* Cooper and Grant  
*Striatifera pinniformis* (Girty) = *Compressoproductus thomasi* Cooper and Grant  
 \**Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant  
*Waagenoconcha leonardensis* King = *Rhamnaria leonardensis* (King)  
*W. montpelierensis* (Girty) = *Waagenoconcha* sp.?

## 121. CATHEDRAL MOUNTAIN FORMATION

- Aulosteges medlicottianus* Waagen = *Edriosteges multispinosus* Muir-Wood and Cooper  
*Lyttonia nobilis americanus* (Girty)  
*Neospirifer pseudocameratus* (Girty) = *N. thescelus* Cooper and Grant  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
*Prorichthofenia uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?

## 122. SKINNER RANCH FORMATION

- Meekella hessensis* King  
*Spirifer marcoui infraplica* King = *Gypospirifer infraplicus* (King)

## 123. CATHEDRAL MOUNTAIN FORMATION = USNM 711q

- Aulosteges beedei* King = *Echinosteges beedei* (King)  
*A. magnicostatus* Girty = *Chonosteges variabilis* Cooper and Grant  
*A. subcostatus* King = *Peniculauris subcostata* (King)  
*Avonia subhorrida rugatula* (Girty) = *Echinauris irregularis* Cooper and Grant

- Camarophoria theveneni* Kozłowski = *Stenoscisma doricranum* Cooper and Grant  
*Chonetes subliratus* Girty  
*Composita mexicana* (Hall) = *C. bucculenta* Cooper and Grant  
*C. mira* (Girty) [doubtful]  
*Derbyia nasuta* Girty  
*Enteleutes leonardensis* King  
*Hustedia meekana* (Shumard)  
*Linoproductus waagenianus* (Girty) = *Megousia* sp.?  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*M. sublaevis* King = *Anemonaria sublaevis* (King)  
*Martinia rhomboidalis* Girty  
*Meekella attenuata* Girty  
*M. difficilis* Girty  
*Neospirifer costella* King = *Lepidospirifer costellus* (King)  
*N. mexicanus latus* King = *Cartorhium latum* (King)  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
*P. leonardensis* King = *Institella leonardensis* (King)  
*P. occidentalis* Newberry = *Rugatia paraindica* (McKee)  
 \**P. schucherti* King = *Xestosia schucherti* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Rhipidomella leonardensis* King = *Acosarina mesoplatys* (King)  
*R. mesoplatys* King = *Acosarina mesoplatys* (King)  
*R. transversa* King = *Acosarina mesoplatys* (King)  
*Spiriferina hilli* Girty = *Paraspiriferina* sp.?

## 124. CATHEDRAL MOUNTAIN FORMATION

- Aulosteges medlicottianus* Waagen = *Edriosteges* sp.?  
*Camarophoria venusta* Girty = *Stenoscisma triquetrum* Cooper and Grant  
*Chonetes subliratus* Girty  
*Composita mira* (Girty) [doubtful]  
*C. subtilita angusta* King  
*Derbyia nasuta* Girty  
*Hustedia meekana* (Shumard)  
*H. mormoni papillata* (Shumard) [doubtful]  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera cristobalensis* Girty  
*M. popei* (Shumard) = *Liosotella* sp.?  
*M. sublaevis* King = *Anemonaria sublaevis* (King)  
*Martinia rhomboidalis* Girty  
*Meekella difficilis* Girty  
*Neospirifer pseudocameratus* (Girty) = *N. mansuetus* Cooper and Grant  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
 \**P. schucherti* King = *Kutorginella* sp.?  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Pugnoides pinguis* (Girty) = *Pontisia stehlii* Cooper and Grant  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris* sp.?

- Waagenoconcha montpelierensis* (Girty) = *Waagenoconcha* sp.?
125. CATHEDRAL MOUNTAIN FORMATION  
*Lyttonia nobilis americanus* (Girty)  
*Linoproductus waggenianus* (Girty) = *Megousia auriculata* Muir-Wood and Cooper  
*Marginifera cristobalensis* Girty = *Echinauris irregularis* Cooper and Grant  
*M. sublaevis* King = *Anemonaria sublaevis* (King)  
*Neospirifer pseudocameratus* (Girty) = *N. mansuetus* Cooper and Grant
126. CATHEDRAL MOUNTAIN FORMATION  
*Composita mira* (Girty) [doubtful]  
*Neospirifer costella* King = *Lepidospirifer costellus* (King)  
*N. mexicanus latus* King = *Cartorhium latum* (King)  
*Productus ivesi* Newberry = *Peniculauris* sp.  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)
127. CATHEDRAL MOUNTAIN FORMATION  
*Camarophoria venusta* Girty  
*Meekella difficilis* Girty
128. CATHEDRAL MOUNTAIN FORMATION = USNM 702  
*Aulosteges magnicostatus* Girty = *Chonosteges variabilis* Cooper and Grant  
*Camarophoria venusta* Girty = *Stenosisma triquetrum* Cooper and Grant  
*Chonetes permianus* Shumard [doubtful]  
*Composita mira* (Girty) [doubtful]  
*Derbyia nasuta* Girty  
*Enteleles leonardensis* King  
*E. plummeri* King  
*Hustedia meekana* (Shumard)  
*H. mormoni papillata* (Shumard) [doubtful]  
*Leiorhynchus bisulcatum* (Shumard) [doubtful]  
*Lyttonia nobilis americanus* (Girty) = *Collemataria gregaria* Cooper and Grant  
*Marginifera cristobalensis* Girty = *Echinauris* sp.  
*Meekella attenuata* Girty  
*M. difficilis* Girty  
*M. globosa* King = *Niviconia globosa* (King)  
*Neospirifer mexicanus latus* King = *Cartorhium latum* (King)  
*N. pseudocameratus* (Girty) = *N. mansuetus* Cooper and Grant  
*Productus ivesi* Newberry = *Peniculauris subcostata* (King)  
*\*P. leonardensis* King = *Institella leonardensis* (King)  
*\*P. occidentalis* Newberry = *Rugatia paraindica* (McKee)  
*\*P. schucherti* King = *Xestosia schucherti* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. uddeni* (Böse) = *Hercosia uddeni* (Böse)  
*Pugnoides bidentatus* (Girty)
- Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris bullata* Cooper and Grant  
*Strophalosia hystricula* Girty = *Echinauris irregularis* Cooper and Grant  
*Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
129. CATHEDRAL MOUNTAIN FORMATION  
*Chonetes subliratus* Girty  
*Neospirifer pseudocameratus* (Girty) = *N. mansuetus* Cooper and Grant
132. ROAD CANYON FORMATION  
*Meekella skenoides* Girty  
*Productus dartoni sullivanensis* King = *Kutorginella sullivanensis* (King)  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
135. WORD FORMATION (WILLIS RANCH MEMBER)  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant
136. WORD FORMATION (WILLIS RANCH MEMBER)  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant
137. WORD FORMATION (WILLIS RANCH MEMBER)  
*Avonia subhorrida rugatula* (Girty) = *Echinauris lateralis* Cooper and Grant  
*Enteleles dumblei* Girty = *E. wordensis* King  
*Striatifera pinniformis* (Girty) = *Compresso-productus* sp.?
138. WORD FORMATION (WILLIS RANCH MEMBER)  
*Avonia signata* (Girty) = *Grandaurispina kingorum* Muir-Wood and Cooper  
*A. subhorrida rugatula* (Girty) = *Costispinifera rugatula* (Girty)  
*Derbyia? crenulata* Girty = ?  
*Linoproductus nasutus* King  
*Neospirifer pseudocameratus* (Girty) = *N. amphigyus* Cooper and Grant  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant
139. [Formation uncertain]  
*Chonetes subliratus* Girty  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant
141. ROAD CANYON FORMATION  
*Enteleles dumblei* Girty [doubtful]  
*Productus indicus* Waagen = *Rugatia mckeei* Cooper and Grant  
*P. ivesi* Newberry = *Peniculauris* sp.  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?

## 142. WORD FORMATION (APPEL RANCH MEMBER)

*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant  
*Spiriferina laxa* Girty = *Reticulariina* sp.?

## 143. WORD FORMATION (APPEL RANCH MEMBER)

*Avonia signata* (Girty) = *Grandaurispina* sp.?  
*Hustedia mormoni papillata* (Shumard) [doubtful]  
*Marginifera opima* (Girty) = *Paucispiniifera* sp.?  
*M. popei* (Shumard) [doubtful]  
*Meekella skenoides* Girty  
*Productus arcticus* Whitfield = *Thamnusia phragmophora* Cooper and Grant

## 144. WORD FORMATION (WILLIS RANCH MEMBER) = approximately USNM 706e

*Ambocoelia guadalupensis* Girty = *Crurithyris tholia-phor* Cooper and Grant  
*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Cooper and Grant  
*A. medlicottianus* Waagen [doubtful]  
*A. tuberculatus* King = *Echinosteges tuberculatus* (King)  
*Avonia meekana* (Girty) = *Grandaurispina meekana* (Girty)  
*A. signata* (Girty) = *Grandaurispina* sp.  
*A. walcottiana* (Girty) = *Echinauris lateralis* Cooper and Grant  
*Camarophoria venusta* Girty = *Stenosisma renode* Cooper and Grant  
*Chonetes subliratus* Girty = *Dyoros (Dyoros) extensus* Cooper and Grant  
*Composita emarginata affinis* Girty = *C. enormis* Cooper and Grant  
*C. mira* (Girty) [doubtful]  
*Derbyia nasuta* Girty  
*Dielasma problematicum wordense* King = *Texarina wordensis* (King) [not from this formation; see text page 2836]  
*D. schucherti minor* King = *Pseudodielasma minor* (King)  
*D. spatulatum* Girty [doubtful]  
*Elivina sulcifer* (Shumard) = *Spiriferella gravis* Cooper and Grant  
*Hustedia meekana* (Shumard) = *H. pugilla* Cooper and Grant  
*H. mormoni papillata* (Shumard) [doubtful]  
*Leiorhynchus weeksi nobilis* (Girty) = *Leiorhynchoidea amygdaloidea* Cooper and Grant  
*Linoproductus waagenianus* (Girty) = *Megousia defnita* Cooper and Grant  
*Lyttonia nobilis americanus* (Girty) = *Collemataria elongata* Cooper and Grant  
*Marginifera opima* (Girty) = *Paucispiniifera auriculata* Muir-Wood and Cooper  
*M. popei* (Shumard) = *Liosotella* sp.?  
*Meekella attenuata* Girty  
*M. skenoides* Girty

*Neospirifer pseudocameratus* (Girty) = *N. amphigyus* Cooper and Grant  
*Productus comancheanus* Girty = *Paucispiniifera* sp.?  
*P. multistriatus* Meek = *Yakovlevia hessorum* Cooper and Grant

*P. occidentalis* Newberry [doubtful]  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant  
*Pugnoides swallowianus* (Shumard) = *Wellerella girtyi* Cooper and Grant  
*Punctospirifer billingsi* (Shumard) [doubtful]  
*Rhynchopora taylori* Girty = *R. palumbula* Cooper and Grant  
*Spiriferina laxa* Girty = *Reticulariina cerina* Cooper and Grant  
*Strophalosia hystricula* Girty = *Heteralosia hystricula* (Girty)

## 145. WORD FORMATION (CHINA TANK MEMBER)

*Chonetes quadratus* King = *Dyoros (Tetragonetes) quadrangulatus* Cooper and Grant  
*C. subliratus* Girty  
*Composita emarginata affinis* Girty = *C. enormis* Cooper and Grant  
*Derbyia nasuta* Girty  
*Linoproductus nasutus* King  
*Lyttonia nobilis americanus* (Girty) = *Collemataria elongata* Cooper and Grant  
*Marginifera opima* (Girty) = *Liosotella* sp.?  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant

## 146. WORD FORMATION (WILLIS RANCH MEMBER)

*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper  
*A. tuberculatus* King = *Echinosteges tuberculatus* (King)  
*Avonia signata* (Girty) = *Grandaurispina kingorum* Muir-Wood and Cooper  
*Elivina sulcifer* (Shumard) = *Spiriferella gravis* Cooper and Grant  
*Lyttonia nobilis americanus* (Girty) = *Collemataria elongata* Cooper and Grant  
*Neospirifer pseudocameratus* (Girty) = *N. amphigyus* Cooper and Grant  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant  
*Waagenoconcha montpelierensis* (Girty) = *W. magnifica* Cooper and Grant

## 147. ROAD CANYON FORMATION

*Lyttonia nobilis americanus* (Girty) = *Collemataria* sp.?  
*Meekella skenoides* Girty

## 148. WORD FORMATION (APPEL RANCH MEMBER)

*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper  
*Avonia signata* (Girty) = *Grandaurispina kingorum* Muir-Wood and Cooper

- Chonetes permianus* Shumard [doubtful]  
*Dielasma spatulatum* Girty [doubtful]  
*Eliovina sulcifer* (Shumard) = *Spiriferella clypeata* Cooper and Grant  
*Hustedia meekana* (Shumard)  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera opima* (Girty) [doubtful]  
*M. popei* (Shumard) = *Liosotella* sp.?  
*Meekella attenuata* Girty [doubtful]  
*M. skenoides* Girty  
*Neospirifer pseudocameratus* (Girty)  
*Productus guadalupensis* Girty = *Yakovlevia indentata* Cooper and Grant  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant  
*Pugnoides swallowianus* (Shumard) [doubtful]
150. WORD FORMATION (APPEL RANCH MEMBER)  
*Avonia signata* (Girty) = *Grandaurispina* sp.?  
*A. subhorrida rugatula* (Girty) = *Echinauris* sp.?  
*Camarophoria venusta* Girty  
*Composita emarginata affinis* Girty [doubtful]  
*Derbyia? crenulata* Girty  
*Eliovina sulcifer* (Shumard) = *Spiriferella* sp.?  
*Meekella attenuata* Girty  
*Neospirifer pseudocameratus* (Girty)
151. CATHEDRAL MOUNTAIN FORMATION  
*Meekella globosa* King = *Niviconia globosa* (King)
152. WORD FORMATION (APPEL RANCH MEMBER)  
*Aulosteges tuberculatus* King = *Echinosteges tuberculatus* (King)  
*Lyttonia nobilis americanus* (Girty)  
*Productus arcticus* Whitfield = *Thamnosia phragmophora* Cooper and Grant  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant
153. ROAD CANYON FORMATION  
*Avonia signata* (Girty) = *Grandaurispina* sp.?  
*Composita mira* (Girty) [doubtful]  
*Derbyia? crenulata* Girty = ?  
*Meekella attenuata* Girty  
*M. skenoides* Girty  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?
154. WORD FORMATION (UPPER)  
*Avonia signata* (Girty) = *Grandaurispina* sp.?  
*Eliovina sulcifer* (Shumard) = *Spiriferella* sp.?  
*Enteleles dumblei* Girty = *Enteleles wordensis* King  
*E. wordensis* King  
*Hustedia meekana* (Shumard)  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera opima* (Girty) = *Paucispinifera* sp.?  
*M. popei* (Shumard) = *Liosotella* sp.  
*Pugnoides elegans* (Girty) [doubtful]
155. WORD FORMATION (UPPER)  
*Camarophoria venusta* Girty  
*Composita persinuata* (Meek) [doubtful]  
*Neospirifer pseudocameratus* (Girty)  
*Productus guadalupensis* Girty = *Yakovlevia* sp.?
158. WORD FORMATION (UPPER) [chert on hill 4732, Hess Canyon Quadrangle]  
*Eliovina sulcifer* (Shumard) = *Spiriferella* sp.?  
*Lyttonia nobilis americanus* (Girty)
159. WORD FORMATION (UPPER)  
*Composita emarginata affinis* Girty [doubtful]
162. WORD FORMATION (APPEL RANCH MEMBER)  
*Avonia signata* (Girty) = *Grandaurispina* sp.?  
*Camarophoria venusta* Girty  
*Composita emarginata affinis* Girty [doubtful]  
*Hustedia meekana* (Shumard)  
*Marginifera opima* (Girty) = *Paucispinifera* sp.?  
*M. popei* (Shumard) = *Liosotella* sp.?  
*M.? wordensis* King = *Liosotella wordensis* (King)  
*Meekella skenoides* Girty  
*Pugnoides swallowianus* (Shumard) [doubtful]
168. NEAL RANCH FORMATION  
*Composita subtilita angusta* King  
*Hustedia meekana* (Shumard)
- 169a. NEAL RANCH FORMATION  
*Derbyia cymbula* Hall and Clarke = *D. profunda* Cooper and Grant  
*Meekella irregularis texana* King = *M. texana* King  
*Pustula semipunctata* (Shepard) [doubtful]
170. WORD FORMATION (UPPER)  
*Meekella attenuata* Girty  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
171. ROAD CANYON FORMATION  
*Camarophoria venusta* Girty  
*Dielasma spatulatum* Girty [doubtful]  
*Lyttonia nobilis americanus* (Girty)  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?
174. CATHEDRAL MOUNTAIN FORMATION  
*Camarophoria venusta* Girty = *Stenosisma triquetrum* Cooper and Grant  
*Composita mira* (Girty) [doubtful]  
*Derbyia nasuta* Girty  
*Marginifera sublaevis* King = *Anemonaria sublaevis* (King)  
*Meekella grandis* King = *M. occidentalis* (Newberry)  
*Neospirifer costella* King = *Lepidospirifer costellus* (King)  
*N. pseudocameratus* (Girty) = *N. mansuetus* Cooper and Grant



- Productus ivesi* Newberry = *Peniculauris subcostata* (King)
- \**P. occidentalis* Newberry = *Rugatia occidentalis parvauris* Cooper and Grant
- \**P. schucherti* King = *Xestosia schucherti* (King)
- Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
- Waagenoconcha montpelierensis* (Girty) = *W.* sp.?
175. GAPTANK FORMATION (Uddenites-BEARING SHALE MEMBER)
- Linoproductus cora* (d'Orbigny) = *L.* sp.?
- Neospirifer triplicatus* (Hall)
- Orthotetella wolfcampensis* King
- Orthotichia kozlowskii* King
- Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?
- Pustula semipunctata* (Shepard) [doubtful]
- 175a. GAPTANK FORMATION (Uddenites-BEARING SHALE MEMBER)
- Chonetes spinoliratus* King = *Chonetinella spinolirata* (King)
- Linoproductus cora* (d'Orbigny) = *L.* sp.?
- \**Martinia wolfcampensis* King = *Composita* sp.?
- Meekella irregularis texana* King = *M. texana* King
- Neospirifer triplicatus* (Hall)
192. WORD FORMATION (APPEL RANCH MEMBER)
- Chonetes quadratus* King = *Dyoros (Tetragonetes) quadrangulatus* Cooper and Grant
- Composita emarginata affinis* Girty [doubtful]
- Derbyia nasuta* Girty
- Hustedia meekana* (Shumard)
- Lyttonia nobilis americanus* (Girty)
- Marginifera popei* (Shumard) = *Liosotella* sp.?
- Meekella attenuata* Girty
- M. skenoides* Girty
- Neospirifer pseudocameratus* (Girty)
- Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?
- Punctospirifer billingsi* (Shumard) [doubtful]
- Spiriferina laxa* Girty = *Reticulariina cerina* Cooper and Grant
193. LENOX HILLS FORMATION
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)
- Avonia boulei* (Kozlowski) = *Echinauris interrupta* Cooper and Grant
- A. meekana* Girty = *Canocrinella* sp.?
- Camarophoria venusta* Girty
- Chonetes biplicatus* King [doubtful]
- Composita subtilita angusta* King
- Hustedia mormoni* (Marcou)
- Linoproductus (Canocrinella) villiersi* (d'Orbigny) = *Canocrinella* sp.?
- Marginifera dugoutensis* King = *Hystriculina dugoutensis* (King)
- Neospirifer triplicatus* (Hall)
- Productus huecoensis* King = *Reticulatia* sp.?
- Teguliferina bösei* King = *T. boesei* King
194. LENOX HILLS FORMATION [probable]
- Parakeyserlingina fredericksi* King [doubtful]
- Spirifer condor* d'Orbigny = *Gypospirifer anancites* Cooper and Grant
195. NEAL RANCH FORMATION
- Ambocoelia planoconvexa* (Shumard) = *Crurithyris* sp.?
- Camarophoria theveneni* Kozlowski = *Stenosisma* sp.?
- Chonetes biplicatus* King = *Chonetinella* sp.?
- C. granulifer* Owen = *Neochonetes* sp.?
- C. verneuillianus* Norwood and Pratten [doubtful]
- Hustedia pusilla* (Girty) [doubtful]
- Linoproductus (Canocrinella) villiersi* (d'Orbigny) = *Canocrinella* sp.?
- Marginifera wabashensis* (Norwood and Pratten) = *Hystriculina* sp.?
- Orthotetella wolfcampensis* King
- Productus semireticulatus hermosanus* Girty = *Reticulatia* sp.?
- P. wolfcampensis* King = *Dasysaria wolfcampensis* (King)
196. LENOX HILLS FORMATION = USNM 716r
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)
- Chonetes granulifer* Owen = *Neochonetes* sp.?
- Composita subtilita* (Hall)
- Enteleles wolfcampensis* King
- Hustedia mormoni* (Marcou)
- Linoproductus cora* (d'Orbigny) = *L.* sp.?
- Marginifera capaci* (d'Orbigny) [doubtful]
- \**Martinia wolfcampensis* King = *Composita* sp.?
- Meekella irregularis texana* King = *M. texana* King
- Neospirifer triplicatus* (Hall)
- Orthotetina* cf. *Orthotetes mutabilis* Girty = young *Geyerella* sp.?
- Orthotichia kozlowskii* King
- Productus semistriatus* Meek = *Nudauris* sp.?
- P. wolfcampensis* King = *Dasysaria wolfcampensis* (King)
- Rhipidomella carbonaria* (Swallow) = *R.* sp.?
- Spirifer condor* d'Orbigny = *Gypospirifer* sp.?
- Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
- \**Uncinuloides guadalupensis* (Shumard) = *Rhynchopora* sp.?
197. LENOX HILLS FORMATION
- Derbyia buchi* (d'Orbigny) = *D. carteri* Cooper and Grant
- Orthotichia kozlowskii* King
198. LENOX HILLS FORMATION
- Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)

- Derbyia buchi* (d'Orbigny) = *D. carteri* Cooper and Grant  
*Linoproductus cora* (d'Orbigny) = *L. sp.*?  
*Neospirifer triplicatus* (Hall)  
*Productus wolfcampensis* King = *Dasysaria wolfcampensis* (King)  
*Rhipidomella carbonaria* (Swallow) = *R. sp.*?  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris sp.*?
199. GAPTANK FORMATION (Uddenites-BEARING SHALE MEMBER) = USNM 701f  
*Composita subtilita angusta* King  
*Dielasma bovidens* (Morton) = *Beecheria sp.*?  
*Meekella irregularis texana* King = *M. texana* King  
*Parenteleles cooperi* King  
\**Scacchinella gigantea* Schellwien = *S. triangulata* Cooper and Grant
201. GAPTANK FORMATION  
*Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)  
*Composita subtilita* (Hall)  
*C. subtilita angusta* King  
*Dielasma bovidens* (Morton) = *Beecheria sp.*?  
*Linoproductus cora* (d'Orbigny) = *L. sp.*?  
*Marginifera dugoutensis* King = *Hystriculina dugoutensis* (King)  
*M. wabashensis* (Norwood and Pratten) = *Hystriculina sp.*?  
\**Martinia wolfcampensis* King = *Composita sp.*?  
*Meekella irregularis texana* King = *M. texana* King  
*Neospirifer triplicatus* (Hall)  
*Orthototella wolfcampensis* King  
*Parenteleles cooperi* King  
*Productus semireticulatus hermosanus* Girty = *Reticulatia sp.*?  
*Squamularia perplexa* (McChesney) = *Neophricadothyris sp.*?
202. GAPTANK FORMATION (Uddenites-BEARING SHALE MEMBER)  
*Composita subtilita* (Hall)  
\**Martinia wolfcampensis* King = *Composita sp.*?  
*Meekella irregularis texana* King = *M. texana* King
203. GAPTANK FORMATION  
*Aulosteges wolfcampensis* King = *Limbella wolfcampensis* (King)  
*Buxtonia occidentalis* King = *Kochiproductus occidentalis* (King)  
*Composita subtilita* (Hall)  
*Dielasma bovidens* (Morton) = *Beecheria sp.*?  
*Isogramma millepunctata* (Meek and Worthen) = *I. vidriense* Cooper and Grant  
*Linoproductus cora* (d'Orbigny) = *L. sp.*?  
*Marginifera capaci* (d'Orbigny) [doubtful]  
*Squamularia perplexa* (McChesney) = *Neophricadothyris sp.*?  
*Teguliferina bösei* King = *T. boesei* King
204. NEAL RANCH FORMATION  
*Marginifera capaci* (d'Orbigny) [doubtful]
205. SKINNER RANCH FORMATION (DECIE RANCH MEMBER)  
*Meekella irregularis texana* King = *M. texana* King
206. SKINNER RANCH FORMATION (DECIE RANCH MEMBER)  
*Productus ivesi* Newberry [doubtful]
207. SKINNER RANCH FORMATION = approximately USNM 714a  
*Aulosteges magnicostatus* Girty  
*Camarophoria venusta* Girty  
*Chonetes permianus* Shumard [doubtful]  
*C. subliratus* Girty  
*Composita subtilita* (Hall)  
*Lyttonia hortonii* King = *Coscinophora sp.*?  
*Marginifera reticulata angusta* King = *Glyptosteges sp.*?  
*M. whitei* King = *Oncosarina sp.*?  
*Prorichthofenia teguliferoides* King = *Acritosia sp.*?  
\**Ucinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
208. SKINNER RANCH FORMATION = USNM 705a  
*Composita subtilita* (Hall)  
*Geyerella americana* Girty = *G. hessi* Cooper and Grant  
*Hustedia hessensis* King  
*Margiufiera? whitei* King = *Elliottella varicostata* Cooper and Grant  
*Meekella hessensis* King  
*Prorichthofenia teguliferoides* King = *Acritosia teguliferoides* (King)  
*Pugnoides texanus* (Shumard) [doubtful]  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant  
*Spiriferina hilli* Girty = *Metriolepis sp.*?  
*Squamularia guadalupensis* (Shumard) = *Neophricadothyris catatona* Cooper and Grant
209. SKINNER RANCH FORMATION  
*Meekella hessensis* King  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant
210. SKINNER RANCH FORMATION  
*Euteletes liumbonus* King
211. SKINNER RANCH FORMATION = approximately USNM 720e  
*Composita subtilita* (Hall)  
*Hustedia hessensis* King  
*Meekella grandis* King [doubtful]  
*M. hessensis* King  
*Productus ivesi* Newberry [doubtful]  
*Prorichthofenia likharewi* King = *Hercosia? sp.*?  
*Scacchinella gigantea* Schellwien = *S. titan* Cooper and Grant

- Spiriferina angulata* King = *Crenispirifer angulatus* (King)  
*Streptorhynchus lamellatum* King = *Diplanus lamellatus* (King)  
*S. undulatum* King = *Tropidelasma undulatum* (King)
212. HESS FORMATION (TAYLOR RANCH MEMBER)  
*Hustedia hessensis* King  
*Pugnoides transversus* King = *Antronaria transversa* (King)
215. HESS FORMATION (TAYLOR RANCH MEMBER)  
*Meekella attenuata* Girty
222. HESS FORMATION (TAYLOR RANCH MEMBER) = USNM 716n  
*Aulosteges medlicottianus* Waagen = *Edriosteges* sp.?   
*Camarophoria venusta* Girty = *Stenosisma pyraustoides* Cooper and Grant  
*Enteleles dumblei* Girty = *E. subcircularis* Cooper and Grant  
*Hustedia hessensis* King  
*Linoproductus cora angustus* King = *L. undatus* Cooper and Grant  
*Lyttonia hortonii* King = *Coscinophora* sp.?   
*L. nobilis americanus* (Girty)  
*Marginifera? whitei* King = *Oncosarina whitei* (King)  
*Meekella hessensis* King  
*Productus hessensis* King = *Thamnosia silicica* Cooper and Grant  
*P. ivesi* Newberry = *Peniculauris imitata* Cooper and Grant  
*Prorichthofenia teguliferoides* King = *Acritosia teguliferoides* (King)  
*Pugnoides transversus* King = *Antronaria transversa* (King)  
*Rhipidomella hessensis* King
223. HESS FORMATION (UPPER) = USNM 726n  
*Composita mexicana* (Hall) = *C. bucculenta* Cooper and Grant  
*C. subtilita* (Hall)  
*Dielasma guadalupensis* Girty = *Plectelasma kingi* Cooper and Grant  
*Hustedia meekana* (Shumard)  
*Marginifera manzanica* Girty = *Oncosarina* sp.?   
*Meekella attenuata* Girty  
*Productus ivesi* Newberry = *Peniculauris imitata* Cooper and Grant  
*Prorichthofenia likharewi* King = *Acritosia peculiaris* Cooper and Grant  
*Pugnoides texanus* (Shumard) = *Pontisia ventricola* Cooper and Grant  
*Spiriferina hilli* Girty = *Reticulariina pusilla* Cooper and Grant  
*Uncinuloides guadalupensis* (Shumard) [doubtful]
224. SKINNER RANCH FORMATION (SULLIVAN PEAK MEMBER)  
*Spiriferina hilli* Girty = *Reticulariina* sp.?
226. SKINNER RANCH FORMATION (SULLIVAN PEAK MEMBER)  
*Aulosteges medlicottianus* Waagen = *Limbella* sp.?   
*Camarophoria venusta* Girty  
*\*Marginifera reticulata* King = *Spyridiophora reticulata* (King)  
*Meekella attenuata* Girty  
*M. difficilis* Girty  
*Prorichthofenia likharewi* King = ?
227. SKINNER RANCH FORMATION (DUGOUT MOUNTAIN MEMBER)  
*Camarophoria venusta* Girty  
*Chonetes subliratus* Girty  
*\*Marginifera reticulata* King = *Glyptosteges* sp.?
228. SKINNER RANCH FORMATION (SULLIVAN PEAK MEMBER)  
*Aulosteges magnicostatus* Girty  
*Marginifera cristobalensis* Girty  
*\*M. reticulata* King = *Spyridiophora reticulata* (King)  
*Meekella difficilis* Girty  
*Prorichthofenia likharewi* King = *Acritosia* sp.?   
*Streptorhynchus lamellatum* King = *Diplanus* sp.?
231. SKINNER RANCH FORMATION AND CATHEDRAL MOUNTAIN FORMATION [mixed]  
*Aulosteges triangularis* King = *Agelesia triangularis* (King) [see note Part III, page 894]  
*Chonetes subliratus* Girty  
*Enteleles plummeri* King  
*\*Productus leonardensis* King = *Institella leonardensis* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?   
*\*Uncinuloides guadalupensis* (Shumard) = *Torynechus caelatus* Cooper and Grant
232. SKINNER RANCH FORMATION AND CATHEDRAL MOUNTAIN FORMATION [mixed]  
*Aulosteges triangularis* King = *Agelesia triangularis* (King)  
*Composita subtilita* (Hall)  
*Enteleles plummeri* King  
*Hustedia meekana* (Shumard)  
*Linoproductus waagenianus* (Girty) = *Megousia* sp.?   
*Marginifera cristobalensis* Girty  
*M. reticulata* King = *Spyridiophora reticulata* (King)  
*Martinia rhomboidalis* Girty  
*Meekella attenuata* Girty  
*\*Productus leonardensis* King = *Institella leonardensis* (King)  
*\*P. occidentalis* Newberry = *Rugatia paraindica* (McKee)  
*\*P. schucherti* King = *Xestosia schucherti* (King)  
*Prorichthofenia likharewi* King = *Hercosia uddeni* (Böse)  
*P. permiana* (Shumard) [doubtful]

- Rhipidomella leonardensis* King = *Acosarina mesoplatys* (King)  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
233. CATHEDRAL MOUNTAIN FORMATION  
*Aulosteges triangularis* King = *Agelesia triangularis* (King)  
*Composita mexicana* (Hall) [doubtful]  
*Hustedia mormoni papillata* (Shumard) [doubtful]
234. SKINNER RANCH FORMATION [top] OR CATHEDRAL MOUNTAIN FORMATION [base]  
*Hustedia meekana* (Shumard)
235. CATHEDRAL MOUNTAIN FORMATION  
*Meekella difficilis* Girty  
*Pugnoides texanus* (Shumard) [doubtful]
236. CATHEDRAL MOUNTAIN FORMATION  
*Hustedia meekana* (Shumard)
237. CATHEDRAL MOUNTAIN FORMATION  
*Aulosteges magnicostatus* Girty  
*A. triangularis* King = *Agelesia triangularis* (King)  
*Hustedia meekana* (Shumard)
238. CATHEDRAL MOUNTAIN FORMATION [probable]  
*Chonetes subliratus* Girty  
*Hustedia mormoni papillata* (Shumard) [doubtful]  
*Lyttonia nobilis americanus* (Girty)  
*Meekella attenuata* Girty
239. WORD FORMATION (WILLIS RANCH MEMBER)  
*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper  
 \**A. triangularis* King = not this species = ?  
*A. tuberculatus* King = *Echinosteges tuberculatus* (King)  
*Avonia walcottiana* (Girty) = *Costispinifera* sp.?  
*Chonetes subliratus* Girty  
*Dielasma spatulatum* Girty [doubtful]  
*D. schucherti minor* King = *Pseudodielasma minor* (King)  
*Hustedia mormoni papillata* (Shumard) [doubtful]  
*Leiorhynchus weeki nobilis* (Girty) = *Leiorhynchoidea* sp.  
*Lyttonia nobilis americanus* (Girty) = *Collemataria elongata* Cooper and Grant  
*Marginifera opima* (Girty) = *Liosotella* sp.?  
*M.?* wordensis King = *Liosotella wordensis* (King)  
*Meekella attenuata* Girty  
*M. skenoides* Girty  
*Neospirifer pseudocameratus* (Girty) = *N. amphigyus* Cooper and Grant
240. WORD FORMATION (WILLIS RANCH MEMBER)  
*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper
- Avonia subhorrida rugatula* (Girty) = *Echinauris lateralis* Muir-Wood and Cooper  
*A. walcottiana* (Girty) = *Costispinifera costata* (King)  
*Composita emarginata affinis* Girty [doubtful]  
*Linoproductus nasutus* King  
*L. waagenianus* (Girty) = *Megousia definita* Cooper and Grant  
*Marginifera?* wordensis King = *Liosotella wordensis* (King)  
*Meekella skenoides* Girty  
*Streptorhynchus pygmaeum* Girty [doubtful]  
*Waagenoconcha montpelierensis* Girty = *W. magnifica* Cooper and Grant
241. ROAD CANYON FORMATION  
*Aulosteges guadalupensis* Shumard = *Rhamnaria tenuispinosa* Cooper and Grant  
*A. tuberculatus* King = *Echinosteges tuberculatus* (King)  
*Avonia latidorsata* (Girty) [doubtful]  
*A. subhorrida rugatula* (Girty) = *Echinauris* sp.  
*A. walcottiana* (Girty) = *Costispinifera costata* (King)  
*A. w. costata* King = *Costispinifera costata* (King)  
*Camarophoria deloi* King = *Stenosisma maniculum* Cooper and Grant  
*Chonetes subliratus* Girty = *Dyoros (Tetragonetes)* sp.?  
*Composita persinuata* Meek [doubtful]  
*Derbyia?* crenulata Girty [doubtful]  
*Elivina sulcifer* (Shumard) = *Spiriferella* sp.?  
*Enteleles dumblei* Girty = *E. subnudus* Cooper and Grant  
*E. wordensis* King [doubtful]  
*Hustedia meekana* (Shumard)  
*H. pusilla* (Girty) [doubtful]  
*Linoproductus nasutus* King  
*L. waagenianus* (Girty) = *Megousia auriculata* Muir-Wood and Cooper  
*Marginifera sublaevis* King [doubtful]  
*Martinia rhomboidalis* Girty  
*Neospirifer pseudocameratus* (Girty) = *N. bakeri* King  
*Productus occidentalis* Newberry = *Rugatia* sp.?  
*Prorichthofenia permiana* (Shumard) = ?  
*Pugnoides swallowianus* (Shumard) [doubtful]  
*Punctospirifer billingsi* (Shumard) = *Paraspiriferina setulosa* Cooper and Grant
212. WORD FORMATION (WILLIS RANCH MEMBER)  
*Marginifera popei* (Shumard) = *Liosotella* sp.?  
*Meekella attenuata* Girty
243. WORD FORMATION (WILLIS RANCH MEMBER)  
*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper  
*A. tuberculatus* King = *Echinosteges tuberculatus* (King)  
*Avonia signata* (Girty) = *Grandaurispina kingorum* Muir-Wood and Cooper  
*Buxtonia victorioensis* King = *Kochiproductus* sp.?  
*Chonetes subliratus* Girty = *Dyoros (Dyoros) extensus* Cooper and Grant

- Composita emarginata affinis* Girty [doubtful]  
*Dielasma spatulatum* Girty [doubtful]  
*Elivina sulcifer* (Shumard) = *Spiriferella gravis* Cooper and Grant  
*Hustedia meekana* (Shumard)  
*H. mormoni papillata* (Shumard) [doubtful]  
*Marginifera opima* (Girty) = *Liosotella* sp.?  
*Meekella skenoides* Girty  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia kingorum* Cooper and Grant  
*Pugnoides swallowianus* (Shumard) = *Wellerella girtyi* Cooper and Grant  
*Punctospirifer billingsi* (Shumard) [doubtful]  
*Rhynchopora taylori* Girty = *R. palumbula* Cooper and Grant
244. WORD FORMATION (APPEL RANCH MEMBER)  
*Lyttonia nobilis americanus*
245. SKINNER RANCH FORMATION [top] OR CATHEDRAL MOUNTAIN FORMATION [base]  
*Aulosteges magnicostatus* Girty  
*Enteleles liumbonus* King [doubtful]  
*Hustedia meekana* (Shumard)  
*Martinia rhomboidalis* Girty  
*Prorichthofenia permiana* (Shumard) [doubtful]  
*Streptorhynchus lamellatum* = *Diplanus lamellatus* (King)
246. WORD FORMATION (APPEL RANCH MEMBER) = USNM 715i?  
*Avonia signata* (Girty) = *Grandaurispina crassa* Cooper and Grant  
*Camarophoria venusta* Girty = *Stenosisma renode* Cooper and Grant  
*Chonetes quadratus* King = *Dyoros (Tetragonetes) quadrangulatus* Cooper and Grant  
*Composita emarginata affinis* Girty [doubtful]  
*Derbyia? crenulata* Girty [doubtful]  
*Elivina sulcifer* (Shumard) = *Spiriferella* sp.?  
*Hustedia meekana* (Shumard)  
*Linoproductus nasutus* King  
*L. (Cancrinella) phosphaticus* (Girty) = *Cancrinella distorta* Cooper and Grant  
*Marginifera opima* (Girty) = *Paucispiniifera* sp.?  
*M. popei* (Shumard) = *Liosotella irregularis* Cooper and Grant  
*M.? texana* (Girty) = *Bothrionia transversa* Cooper and Grant  
*Neospirifer pseudocameratus* (Girty)  
*Productus arcticus* Whitfield = *Thamnosia phragmophora* Cooper and Grant  
*P. guadalupensis* Girty = *Yakovlevia indentata* Cooper and Grant  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
247. WORD FORMATION (APPEL RANCH MEMBER)  
*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper
- A. tuberculatus* King = *Echinosteges tuberculatus* (King)  
*Avonia signata* (Girty) = *Grandaurispina crassa* Cooper and Grant  
*Camarophoria venusta* Girty  
*Chonetes quadratus* King = *Dyoros (Tetragonetes) quadrangulatus* Cooper and Grant  
*Composita emarginata affinis* Girty [doubtful]  
*Elivina sulcifer* (Shumard) = *Spiriferella clypeata* Cooper and Grant  
*Hustedia meekana* (Shumard)  
*Linoproductus nasutus* King  
*L. (Cancrinella) phosphaticus* (Girty) = *Cancrinella distorta* Cooper and Grant  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera opima* (Girty) = *Paucispiniifera* sp.?  
*M. popei* (Shumard) = *Liosotella irregularis* Cooper and Grant  
*M.? texana* (Girty) = *Bothrionia transversa* Cooper and Grant  
*Meekella skenoides* Girty  
*Productus arcticus* Whitfield = *Thamnosia phragmophora* Cooper and Grant  
*P. guadalupensis* (Girty) = *Yakovlevia indentata* Cooper and Grant  
*P. occidentalis* Newberry [doubtful]  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?  
*Spiriferina laxa* Girty = *Reticulariina cerina* Cooper and Grant  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris conara* Cooper and Grant  
*Waagenoconcha montpelierensis* (Girty) = *W. magnifica* Cooper and Grant
248. WORD FORMATION (APPEL RANCH MEMBER)  
*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper  
*Avonia signata* (Girty) = *Grandaurispina crassa* Cooper and Grant  
*A. walcottiana* (Girty) = *Echinauris* sp.?  
*Chonetes hillanus* Girty [doubtful]  
*Composita emarginata affinis* Girty [doubtful]  
*Derbyia? crenulata* Girty [doubtful]  
*Elivina sulcifer* (Shumard) = *Spiriferella clypeata* Cooper and Grant  
*Hustedia meekana* (Shumard)  
*Linoproductus nasutus* King  
*Marginifera opima* (Girty) = *Paucispiniifera* sp.?  
*M. popei* (Shumard) = *Liosotella irregularis* Cooper and Grant  
*Meekella skenoides* Girty
249. ROAD CANYON FORMATION  
*Lyttonia nobilis americanus* (Girty)
250. WORD FORMATION (CHINA TANK MEMBER)  
*Chonetes sublratus* Girty  
*Lyttonia nobilis americanus* (Girty)

- Meekella skenoides* Girty  
*Neospirifer pseudocameratus* (Girty)
251. ROAD CANYON FORMATION  
*Enteleles wordensis* King [doubtful]  
*Lyttonia nobilis americanus* (Girty)
252. WORD FORMATION (APPEL RANCH MEMBER)  
*Aulosteges guadalupensis* Shumard = *Rhamnaria kingorum* Muir-Wood and Cooper  
*Elivina sulcifer* (Shumard) = *Spiriferella clypeata* Cooper and Grant  
*Meekella attenuata* Girty
253. WORD FORMATION (APPEL RANCH MEMBER)  
*Avonia signata* (Girty) = *Grandaurispina crassa* Cooper and Grant  
*Chonetes subliratus* Girty  
*Hustedia meekana* (Shumard)  
*Marginifera opima* (Girty) = *Paucispinifera* sp.
256. WORD FORMATION OR CATHEDRAL MOUNTAIN FORMATION  
*Chonetes quadratus* King = *Dyoros* (*Tetragonetes*) *quadrangulatus* Cooper and Grant  
*Neospirifer pseudocameratus* (Girty)  
*Productus ivesi* Newberry = *Peniculauris* sp.?  
*Rhipidomella mesoplatys* King = *Acosarina mesoplatys* (King)  
*Squamularia guadalupensis* (Shumard) = *Neophri-cadothyris* sp.?
257. WORD FORMATION  
*Composita emarginata affinis* Girty [doubtful]  
*Neospirifer pseudocameratus* (Girty)  
*Productus ivesi* Newberry [doubtful]
264. WORD FORMATION (CHINA TANK MEMBER)  
*Enteleles dumblei* Girty [doubtful]  
*E. wordensis* King  
*Hustedia mormoni papillata* (Shumard) [doubtful]  
*Lyttonia nobilis americanus* (Girty)  
*Meekella attenuata* Girty  
*Spiriferina pyramidalis* Girty = *Metriolepis* sp.?
265. WORD FORMATION [0.8 mi NW of hill 5079, northwestern Hess Canyon quadrangle, float lying on the surface of the upper Vidrio]  
*Ambocoelia guadalupensis* Girty = *Crurithyris tholia-phor* Cooper and Grant  
*Aulosteges guadalupensis* Shumard = *Rhamnaria* sp.?  
*Camarophoria? indentata* (Shumard) = ?  
*Chonetes subliratus* Girty = *Dyoros* (*Dyoros*) sp.?  
*Derbyia elevata* King  
*Elivina sulcifer* (Shumard) = *Spiriferella* sp.?  
*Enteleles wordensis* King  
*Hustedia meekana* (Shumard) [doubtful]  
*Leiorhynchus weeksi nobilis* (Girty) = *Leiorhynchoidea* sp.?  
*Lyttonia nobilis americanus* (Girty)  
*Marginifera? wordensis* King = *Liosatella wordensis* (King)  
*Meekella attenuata* Girty  
*Productus schucherti* King [doubtful]  
*Prorichthofenia permiana* (Shumard) = *Cyclacantharia* sp.?  
*Spiriferina laxa* Girty = *Reticulariina* sp.?
301. CATHEDRAL MOUNTAIN FORMATION  
*Chonetes permianus* Shumard [doubtful]  
*Productus ivesi* Newberry = *Peniculauris* sp.?

### United States Geological Survey Localities

Descriptions are given for those localities not included in the list presented in Part I, page 135.

- 664 (green). *Rugatia occidentalis parvauris* Cooper and Grant
- 2903 (green). Cherry Canyon Formation [about 700 ft above basal black limestone in Delaware Mountain Sandstone, escarpment on E side of road at entrance to Guadalupe Canyon, Guadalupe Peak Quadrangle]  
*Costispinifera walcottiana* (Girty)
- 2906 (green). *Rigbyella girtyi* Stehli
- 2919 (green). *Paucispinifera guadalupensis* (Girty)
- 2920 (green). *Bryorhynchus? nitidum* (Girty)
2926. *Ambocoelia planconvexa* var. *guadalupensis* Girty = *Crurithyris guadalupensis* (Girty)  
*Aulosteges medlicottianus* var. *americanus* Girty = [brachial valve of *Ombonia*]  
*Camarophoria venusta* Girty = *Stenoscisma* sp.?

- Chonetes hillanus* Girty = *Dyoros* (*Dyoros*) sp.?  
*Composita emarginata* Girty  
*Composita emarginata* var. *affinis* Girty = *Composita affinis* Girty  
*Crania* sp.  
*Dielasma cordatum* Girty  
*Dielasma prolongatum* Girty  
*Dielasma? scutulatum* Girty = *Pseudodielasma scutulatum* (Girty)  
*Dielasma spatulatum* Girty  
*Dielasma sulcatum* Girty  
*Dielasma guadalupensis* Girty = *Plectelasma guadalupense* (Girty)  
*Eliva inflata* Cooper and Grant  
*Geyerella americana* Girty  
*Heterelasma shumardianum* Girty  
*Heterelasma venustulum* Girty  
*Hustedia meekana* (Shumard) Girty = *Hustedia* sp.?  
*Hustedia meekana* var. *trigonalis* Girty = *Thedusia trigonalis* (Girty)

- Leptodus guadalupensis* Girty = *Collemataria guadalupensis* (Girty)  
*Martinia rhomboidalis* Girty  
*Martinia shumardiana* Girty  
*Notothyris schuchertensis* Girty = *Timorina schuchertensis* (Girty)  
*Notothyris schuchertensis* var. *ovata* Girty = *Timorina ovata* (Girty)  
*Orthotetes distortus* Girty = *Ombonia guadalupensis* (Girty)  
*Orthotetes distortus campanulatus* Girty = *Ombonia guadalupensis* (Girty)  
*Orthotetes guadalupensis* Girty = *Ombonia guadalupensis* (Girty)  
*Productus latidorsatus* Girty = *Paucispinifera latidorsata* (Girty)  
*Productus occidentalis* Girty [not Newberry] = *Paucispinifera* sp.?  
*Productus? pileolus* Shumard = *Scapharina pileolus* (Shumard)  
*Productus pinuiformis* Girty = *Compressoproductus pinuiformis* (Girty)  
*Productus semireticulatus* var. *capitanensis* Girty = *Thamnosia capitanensis* (Girty)  
*Productus waagenianus* Girty = *Megousia? waageniana* (Girty)  
*Pugnax? bisulcata* var. *seminuloides* Girty = *Bryorhynchus graciosum* (Girty)  
*Pugnax elegans* Girty = *Tautosia elegans* (Girty)  
*Pugnax shumardiana* Girty = *Tautosia shumardiana* (Girty)  
*Pugnax swallowiana* (Shumard) Girty = *Anteridocus swallowiana* (Shumard) of Girty  
*Rhamnaria shumardi* Cooper and Grant  
*Rhynchonella? indentata* Shumard, Girty = *Strigirhynchia* sp.?  
*Rhyuchonella? longaeua* Girty = *Fascicosta* sp.?  
*Richthofenia permiana* Girty [not Shumard] = ?  
*Spirifer mexicanus* Shumard of Girty = *Cartorhium mexicanum* (Girty)  
*Spirifer sulcifer* Shumard = *Spiriferella sulcifer* (Shumard)  
*Spiriferina billingsi* Shumard Girty = *Paraspiriferina billingsi* (Shumard) of Girty  
*Spiriferina billingsi* var. *retusa* Girty = *Paraspiriferina billingsi retusa* (Girty)  
*Spiriferina pyramidalis* Girty = *Sarganostega pyramidalis* (Girty)  
*Spiriferina sulcata* Girty = *Paraspiriferina evax* (Girty)  
*Spiriferina welleri* Girty = *Reticulariina welleri* (Girty)  
*Squamularia guadalupensis* Shumard of Girty = *Astegosia subquadrata* (Girty)  
*Squamularia guadalupensis* var. *ovalis* Girty = *Astegosia subquadrata* (Girty)  
*Squamularia guadalupensis* var. *subquadrata* Girty = *Astegosia subquadrata* (Girty)  
*Streptorhynchus gregarium* Girty = *Tropidelasma gregarium* (Girty)
2930. *Bryorhynchus bisulcatum* (Shumard)  
*Bryorhynchus graciosum* (Girty)  
*Dyoros (Dyoros) subliratus* (Girty)
2962. *Tropidelasma perattenuatum* (Girty)
- 2967 (green). *Petasmatherus pusillus* (Girty)
2969. *Craspedona newelli* Cooper and Grant
3763. *Camarophoria venusta* Girty = *Stenosisma* sp.?  
*Enteleles globosus* Girty  
*Hustedia bipartita* Girty  
*Hustedia papillata* (Shumard) of Girty = *Hustedia* sp.?  
*Lyttonia nobilis americanus* (Girty) = *Collemataria* sp.?  
*Meekella difficilis* Girty = *Meekella skenoides* Girty  
*Meekella skenoides* Girty  
*Productus guadalupensis* var. *comancheanus* Girty = *Paucispinifera comancheana* (Girty)  
*Productus meekanus* Girty = *Grandaurispina* sp.?  
*Productus subhorridus* var. *rugatulus* Girty = *Costispinifera rugatula* (Girty)  
*Richthofenia permiana* Girty [not Shumard] = ?  
*Spiriferina hilli* Girty = *Spiriferellina* sp.?  
*Streptorhynchus pygmaeum* Girty = *Tropidelasma* sp.?  
*Strophalosia hystricula* Girty = *Heteralosia* sp.?  
 3764 (green). ["The recorded locality is the vicinity of the Diablo Mtns., but this is probably a mistake. The material to which this label actually applies and with which the present lot is probably mixed appears to be that mentioned in Von Streerowitz's report and sent to the U.S. National Museum by E. T. Dumble, Jan. 18, 1892" Girty (1909:512).]  
*Collemataria americana* (Girty)
- 3840 (green). *Chonosteges magnicostatus* (Girty)
- 6452 (blue). Delaware Mountain Formation [True Canyon, Delaware Mtns., 7 mi NW of 7-Heart Gap, Culberson Co., Texas]  
*Glossothyropsis robusta* (Girty)
7404. *Anteridocus swallowianus* (Shumard)  
*Cartorhium* sp.  
*Composita emarginata* Girty  
*Dielasma prolongatum* Girty  
*Dielasma* sp.  
*Dielasma* sp. 6  
*Echinosteges guadalupensis* (Shumard)  
*Eliva inflata* Cooper and Grant  
*Heterelasma* sp.  
*Hustedia* sp.  
*Liosotella opima* (Girty)  
*Paraspiriferina billingsi* (Shumard)  
*Pseudoleptodus guadalupensis* Stehli  
*Ptilotorhynchus delicatum* Cooper and Grant  
*Stenosisma* sp.  
*Strigirhynchia indentata* (Shumard)  
*Thamnosia capitanensis* (Girty)
- 7415 (blue). Carlsbad Limestone Formation [N rim of Pine Spring Canyon, 2.3 mi N 5° W of summit of El Capitan.



between third and fourth hills NW of trail leading down into canyon, Guadalupe Peak Quadrangle, Culberson Co., Texas]

*Notothyris* sp.

7416. *Plectelasma guadalupense* (Girty)

7417 (blue). *Eolyttonia* sp.  
*Meekella skenoides* Girty  
*Pseudoleptodus guadalupensis* Stehli

7612. *Pseudoleptodus guadalupensis* Stehli

7641 (blue). Middle Delaware Mountain Formation (Bed B B, upper part of South Wells Limestone Member) [just W of Long Point, between Delaware River and D Ranch South Wells, E of quadrangle, Guadalupe Peak Quadrangle, Culberson Co., Texas]

*Leiorhynchoidea sulcata* Cooper and Grant

7649. *Glossothyropsis robusta* (Girty)  
*Leiorhynchoidea sulcata* Cooper and Grant  
*Paranorella* sp.

7666. *Acosarina* sp.  
*Anemonaria* sp.  
*Cenorhynchia* sp.

*Chaeniorhynchus* sp.  
*Chonosteges* sp.  
*Composita* sp.  
*Derbyia* sp.  
*Dielasma* sp.  
*Echinauris* sp.  
*Edriosteges* sp.  
*Institella leonardensis* (R. E. King)  
*Lepidospirifer* cf. *L. costellus* (R. E. King)  
*Martinia* sp.  
*Meekella* sp.  
*Megousia* sp.  
*Neophricadothyris* sp.  
*Neospirifer* sp.  
*Niviconia globosa* (R. E. King)  
*Peniculauris* sp.  
*Rhipidomella* sp.  
*Rugatia paraindica* (McKee)  
*Stenosisma triquetrum* Cooper and Grant  
*Tautosia* sp.  
*Thamnosia* sp.  
*Waagenoconcha* sp.  
*Xestosia* sp.

9999. *Reticulariina hueconiana* Cooper and Grant  
*Stenosisma* sp. 1

American Museum of Natural History, Kansas University,  
and National Museum of Natural History Localities

Descriptions for localities that appear in this list but not in Part I, pages 135–165, will be found herein in “Corrigenda” under “Additions to Localities.” Abbreviations used in locality designations in this list are:

- A = American Museum of Natural History [abbreviated elsewhere herein: AMNH]
- M = Kansas University (R. C. Moore) [abbreviated elsewhere herein: Moore]
- N = National Museum of Natural History, formerly United States National Museum [abbreviated elsewhere herein: USNM]

Following the species name of each listed form there appears a rarity code symbol indicating the abundance of the species in the collection:

- VR = very rare (1–5 specimens)
- R = rare (6–25 specimens)

- C = common (26–100 specimens)
- A = abundant (101–300 specimens)
- VA = very abundant (301–3000 specimens)
- SA = super abundant (more than 3000 specimens)

The magnitude of occurrence in the collection indicated by the rarity code is a measure of the probable abundance of that species in the rocks of the Glass Mountains. A truly accurate measure of abundance is not possible due to the methods of recovery used. Also, evaluation of the actual numbers of specimens represented by dissociated valves and broken valves was not undertaken. Considering collecting bias and the factors mentioned, these rarity symbols are, nevertheless, indicative of the relative abundance of each species at the designated localities.

LOCALITY	Rarity code		Rarity code
A21 : Cherry Canyon Formation, Getaway Member		<i>Dielasma pictile</i> Cooper and Grant .....	VR
<i>Cartorhium retusum</i> Cooper and Grant .....	VR	<i>Dyoros (Dyoros) convexus</i> Cooper and Grant .....	R
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	R	<i>Dyoros (Tetragonetes) complanatus</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Echinauris productelloides</i> Cooper and Grant .....	R
		<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR

	Rarity code		Rarity code
LOCALITY A21 - Continued		LOCALITY A37 : Bell Canyon Formation, Lamar	
<i>Eolyttonia progressa</i> Cooper and Grant .....	VR	Member	
<i>Geyerella</i> sp. 2 .....	VR	<i>Allorhynchus</i> sp. ....	VR
<i>Grandaurispina undulata</i> Cooper and Grant .....	VR	<i>Anteridocus swallovianus</i> (Shumard) .....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	VR	<i>Aphaurosia rotundata</i> Cooper and Grant .....	VR
<i>Hustedia citeria</i> Cooper and Grant .....	VR	<i>Arionthia lamaria</i> Cooper and Grant .....	VR
<i>Liosotella spinumbona</i> Cooper and Grant .....	VR	<i>Astegosia subquadrata</i> (Girty) .....	R
<i>Liosotella wordensis</i> (R.E. King) .....	R	<i>Composita affinis</i> Girty .....	R
<i>Micraphelia scitula</i> Cooper and Grant .....	R	<i>Composita emarginata</i> Girty .....	VR
<i>Paucispinifera tumida</i> Cooper and Grant .....	VR	<i>Crenispirifer myllus</i> Cooper and Grant .....	R
<i>Petasmatherus opulus</i> Cooper and Grant .....	VR	<i>Crurithyris guadalupensis</i> (Girty) .....	VR
<i>Pseudodielasma</i> sp. ....	VR	<i>Deltarina magnicostata</i> Cooper and Grant .....	VR
<i>Rhamnaria sulcata</i> Cooper and Grant .....	R	<i>Derbyia</i> sp. 1 .....	VR
<i>Thedusia dischides</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Wellerella girtyi seorsa</i> Cooper and Grant .....	VR	<i>Dielasma subcirculare</i> Cooper and Grant .....	VR
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR	<i>Elivina detecta</i> Cooper and Grant .....	VR
LOCALITY A25 : Bell Canyon Formation, Lamar		<i>Heteralosia magnispina</i> Cooper and Grant .....	VR
Member		<i>Hustedia opsia</i> Cooper and Grant .....	R
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	<i>Lirellaria costellata</i> Cooper and Grant .....	VR
<i>Composita affinis</i> Girty .....	VR	<i>Martinia rhomboidalis</i> Girty .....	R
<i>Crenispirifer myllus</i> Cooper and Grant .....	R	<i>Ombonia guadalupensis</i> (Girty) .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Paraspiriferina billingsi</i> (Shumard) .....	VR
<i>Hustedia opsia</i> Cooper and Grant .....	R	<i>Reticulariina</i> sp. ....	R
<i>Martinia rhomboidalis</i> Girty .....	R	<i>Sarganostega pressa</i> Cooper and Grant .....	R
<i>Neophricadothyris</i> sp. ....	VR	<i>Scapharina levis</i> Cooper and Grant .....	VR
<i>Ombonia guadalupensis</i> (Girty) .....	R	<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	<i>Stenosisma trabeatum</i> Cooper and Grant .....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Tautosia elegans</i> (Girty) .....	VR
<i>Sarganostega pressa</i> Cooper and Grant .....	R	<i>Tropidelasma gregarium</i> (Girty) .....	C
<i>Spiriferellina nuda</i> Cooper and Grant .....	VR	LOCALITY A38 : Bell Canyon Formation, Lamar	
<i>Thedusia trigonalis</i> (Girty) .....	VR	Member	
<i>Tropidelasma gregarium</i> (Girty) .....	R	<i>Allorhynchus venustulum</i> Cooper and Grant .....	VR
LOCALITY A28 : Cherry Canyon Formation, Getaway		<i>Arionthia lamaria</i> Cooper and Grant .....	VR
Member		<i>Collemataria</i> sp. ....	VR
<i>Echinauris productelloides</i> Cooper and Grant .....	VR	<i>Collemataria spatulata</i> Cooper and Grant .....	VR
<i>Hustedia citeria</i> Cooper and Grant .....	VR	<i>Composita affinis</i> Girty .....	VR
<i>Meekella skenoides</i> Girty .....	VR	<i>Crenispirifer myllus</i> Cooper and Grant .....	R
LOCALITY A33 : Bell Canyon Formation, Pinery		<i>Crurithyris guadalupensis</i> (Girty) .....	VR
Member		<i>Derbyia</i> sp. 1 .....	VR
<i>Anteridocus swallovianus</i> (Shumard) .....	VR	<i>Eolyttonia</i> sp. ....	VR
<i>Bryorhynchus bisulcatum</i> (Shumard) .....	A	<i>Heteralosia paucispinosa</i> Cooper and Grant .....	VR
<i>Chonetinetes varians</i> Cooper and Grant .....	VR	<i>Hustedia opsia</i> Cooper and Grant .....	R
<i>Composita pyriformis</i> Cooper and Grant .....	VR	<i>Lirellaria costellata</i> Cooper and Grant .....	VR
<i>Crenispirifer jubatus</i> Cooper and Grant .....	VR	<i>Martinia rhomboidalis</i> Girty .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>intrepidus</i> Cooper and Grant .....	VR	<i>Ombonia guadalupensis</i> (Girty) .....	R
<i>Fascicosta elongata</i> Cooper and Grant .....	VR	<i>Paraspiriferina billingsi</i> (Shumard) .....	R
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Reticulariina phoxa</i> Cooper and Grant .....	VR
<i>Hustedia demissa</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Hustedia opsia</i> Cooper and Grant .....	VR	<i>Rigbyella girtyi</i> (Wanner and Sieverts) .....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	R	<i>Sarganostega pressa</i> Cooper and Grant .....	R
<i>Madarosia anterolamellata</i> Cooper and Grant .....	VR	<i>Sarganostega transversalis</i> Cooper and Grant .....	VR
<i>Micraphelia subalata</i> Cooper and Grant .....	VR	<i>Scapharina levis</i> Cooper and Grant .....	R
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	VR	<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR
<i>Paucispinifera latidorsata</i> (Girty) .....	VR	<i>Tautosia elegans</i> (Girty) .....	VR
<i>Plectelasma guadalupense</i> (Girty) .....	VR	<i>Thedusia ventricosa</i> Cooper and Grant .....	VR
<i>Reticulariina welleri</i> (Girty) .....	VR	<i>Timorina ovata</i> (Girty) .....	VR
<i>Spiriferella</i> sp. ....	VR	<i>Tropidelasma gregarium</i> (Girty) .....	R
<i>Spiriferellina nuda</i> Cooper and Grant .....	VR	LOCALITY A39 : Bell Canyon Formation, Lamar	
<i>Tautosia shumardiana</i> (Girty) .....	VR	Member	
<i>Thedusia</i> sp. ....	VR	<i>Astegosia subquadrata</i> (Girty) .....	VR
<i>Thedusia ventricosa</i> Cooper and Grant .....	VR	<i>Composita affinis</i> Girty .....	R
<i>Timorina ovata</i> (Girty) .....	VR	<i>Hustedia opsia</i> Cooper and Grant .....	VR
		<i>Martinia rhomboidalis</i> Girty .....	VR

	Rarity code		Rarity code
LOCALITY A39 - Continued			
<i>Meekella</i> sp. ....	VR	<i>Astegosia subquadrata</i> (Girty) .....	A
<i>Ombonia guadalupensis</i> (Girty) .....	VR	<i>Collemataria spatulata</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	<i>Composita affinis</i> Girty .....	C
<i>Paucispinifera latidorsata</i> (Girty) .....	VR	<i>Crenispirifer myllus</i> Cooper and Grant .....	R
<i>Sarganostega pressa</i> Cooper and Grant .....	VR	<i>Crurithyris guadalupensis</i> (Girty) .....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR	<i>Deltarina magnicostata</i> Cooper and Grant .....	VR
<i>Thedusia ventricosa</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. 1 .....	VR
<i>Tropidelasma gregarium</i> (Girty) .....	VR	<i>Dielasma cordatum</i> Girty .....	VR
		<i>Dielasma sulcatum</i> Girty .....	VR
LOCALITY A40 : Bell Canyon Formation, Lamar			
Member			
<i>Allorhynchus venustulum</i> Cooper and Grant .....	R	<i>Elivina detecta</i> Cooper and Grant .....	C
<i>Anomaloria anomala</i> Cooper and Grant .....	R	<i>Geyerella americana</i> Girty .....	VR
<i>Anteridocus bicostatus</i> Cooper and Grant .....	VR	<i>Hustedia opsia</i> Cooper and Grant .....	R
<i>Anteridocus swallowianus</i> (Shumard) .....	VR	<i>Martinia rhomboidalis</i> Girty .....	A
<i>Astegosia subquadrata</i> (Girty) .....	C	<i>Ombonia guadalupensis</i> (Girty) .....	R
<i>Bryorhynchus bisulcatum</i> (Shumard) .....	VR	<i>Paranorella aquilonia</i> Cooper and Grant .....	VR
<i>Cleiothyridina pilularis</i> Cooper and Grant .....	VR	<i>Paraspiriferina billingsi</i> (Shumard) .....	R
<i>Collemataria spatulata</i> Cooper and Grant .....	VR	<i>Reticulariina welleri</i> (Girty) .....	VR
<i>Composita affinis</i> Girty .....	R	<i>Rhynchopora</i> sp. b .....	VR
<i>Crenispirifer myllus</i> Cooper and Grant .....	R	<i>Sarganostega pressa</i> Cooper and Grant .....	R
<i>Crurithyris guadalupensis</i> (Girty) .....	R	<i>Spiriferellina nuda</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. 1 .....	VR	<i>Stenosisma abbreviatum</i> Cooper and Grant .....	VR
<i>Elivina detecta</i> Cooper and Grant .....	VR	<i>Stenosisma trabeatum</i> Cooper and Grant .....	VR
<i>Hustedia opsia</i> Cooper and Grant .....	C	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Lirellaria costellata</i> Cooper and Grant .....	VR	<i>Tropidelasma gregarium</i> (Girty) .....	R
<i>Martinia rhomboidalis</i> Girty .....	C		
<i>Ombonia guadalupensis</i> (Girty) .....	R	LOCALITY A348 : Bell Canyon Formation, Lamar	
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	R	Member	
<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR	<i>Allorhynchus venustulum</i> Cooper and Grant .....	VR
<i>Stenosisma trabeatum</i> Cooper and Grant .....	VR	<i>Arionthia lamaria</i> Cooper and Grant .....	VR
<i>Tautosia elegans</i> (Girty) .....	R	<i>Astegosia subquadrata</i> (Girty) .....	VR
<i>Timorina schuchertensis</i> (Girty) .....	VR	<i>Collemataria spatulata</i> Cooper and Grant .....	VR
<i>Tropidelasma gregarium</i> (Girty) .....	R	<i>Composita affinis</i> Girty .....	VR
		<i>Crenispirifer myllus</i> Cooper and Grant .....	VR
LOCALITY A46 : Bone Spring Formation			
<i>Micraphelia pumilis</i> Cooper and Grant .....	VA	<i>Hustedia opsia</i> Cooper and Grant .....	VR
<i>Pseudoleptodus?</i> sp. 1 .....	VR	<i>Martinia rhomboidalis</i> Girty .....	VR
		<i>Ombonia guadalupensis</i> (Girty) .....	VR
LOCALITY A B188-6 : San Andres Formation			
<i>Composita</i> sp. ....	C	<i>Sarganostega pressa</i> Cooper and Grant .....	VR
<i>Tropidelasma curtum</i> Cooper and Grant .....	R	<i>Scapharina levis</i> Cooper and Grant .....	VR
		<i>Spiriferellina nuda</i> Cooper and Grant .....	VR
LOCALITY A B188-8 : San Andres Formation			
<i>Altiplecus</i> sp. ....	VR	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Crurithyris</i> sp. ....	VR	<i>Tropidelasma gregarium</i> (Girty) .....	R
<i>Derbyia</i> sp. ....	VR		
<i>Derbyia texta</i> Cooper and Grant .....	VR	LOCALITY A351 : Bell Canyon Formation, Lamar	
<i>Enteleles</i> sp. ....	C	Member	
<i>Enteleles subnudus</i> Cooper and Grant .....	R	<i>Allorhynchus venustulum</i> Cooper and Grant .....	VR
<i>Heterelasma</i> sp. ....	VR	<i>Astegosia subquadrata</i> (Girty) .....	VR
<i>Meekella skenoides</i> Girty .....	VR	<i>Composita affinis</i> Girty .....	R
<i>Metriolepis</i> sp. ....	VR	<i>Crenispirifer myllus</i> Cooper and Grant .....	VR
<i>Metriolepis ziczac</i> Cooper and Grant .....	R	<i>Crurithyris guadalupensis</i> (Girty) .....	R
<i>Paucispinifera costellata</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Rhynchopora</i> sp. ....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>hillanus</i> (Girty) .....	VR
<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	R	<i>Heteralosia magnispina</i> Cooper and Grant .....	VR
		<i>Hustedia opsia</i> Cooper and Grant .....	R
LOCALITY A347 : Bell Canyon Formation, Lamar			
Member			
<i>Allorhynchus venustulum</i> Cooper and Grant .....	VR	<i>Martinia rhomboidalis</i> Girty .....	R
<i>Anomaloria anomala</i> Cooper and Grant .....	R	<i>Ombonia guadalupensis</i> (Girty) .....	VR
<i>Anteridocus bicostatus</i> Cooper and Grant .....	VR	<i>Paraspiriferina</i> sp. ....	VR
<i>Anteridocus swallowianus</i> (Shumard) .....	VR	<i>Reticulariina laxa</i> (Girty) .....	VR
<i>Aphaurosia rotundata</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	R	<i>Sarganostega pressa</i> Cooper and Grant .....	VR
		<i>Thedusia trigonalis</i> (Girty) .....	VR
		<i>Tropidelasma gregarium</i> (Girty) .....	R
		LOCALITY A369 : Bone Spring Formation	
		<i>Composita cracens</i> Cooper and Grant .....	VR
		<i>Composita</i> sp. ....	VF
		<i>Crenispirifer sagus</i> Cooper and Grant .....	I

	Rarity code		Rarity code
LOCALITY A369 - Continued			
<i>Cyclacantharia</i> sp. ....	VR	<i>Composita pyriformis</i> Cooper and Grant.....	VR
<i>Derbyia</i> sp. ....	VR	<i>Crenispirifer</i> sp. ....	VR
<i>Dielasma</i> sp. ....	VR	<i>Derbyia</i> sp. ....	VR
<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant....	C	<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant.....	VR
<i>Echinauris</i> sp. ....	R	<i>Glossothyropsis</i> sp. 1 (Girty).....	VR
<i>Elivina</i> sp. ....	VR	<i>Hustedia rupinata</i> Cooper and Grant.....	R
<i>Hustedia decollatensis</i> Cooper and Grant.....	C	<i>Micraphelia subalata</i> Cooper and Grant.....	R
<i>Hustedia</i> sp. ....	R	<i>Paraspiriferina</i> sp. ....	VR
<i>Kochiproductus</i> sp. ....	VR	<i>Plectelasma guadalupense</i> (Girty).....	VR
<i>Meekella hessensis</i> R.E. King.....	C	<i>Reticulariina phoxa</i> Cooper and Grant.....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	C	<i>Spiriferella</i> sp. ....	VR
<i>Paraspiriferina</i> sp. ....	VR	<i>Thedusia trigonalis</i> (Girty).....	VR
<i>Paucispinifera</i> sp. ....	VR	LOCALITY A389 : Bell Canyon Formation, Rader	
<i>Pseudodielasma</i> sp. ....	VR	Member	
<i>Quadrochonetes girtyi</i> Stehli.....	VR	<i>Astegosia subquadrata</i> (Girty).....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Martinia rhomboidalis</i> Girty.....	VR
<i>Reticulariina tetrica</i> Cooper and Grant.....	VR	<i>Ombonia guadalupensis</i> (Girty).....	VR
<i>Rugatia paraindica</i> (McKee).....	VR	LOCALITY A390 : Hueco Formation	
<i>Sarganostega prisca</i> Cooper and Grant.....	R	<i>Composita cracens</i> Cooper and Grant.....	C
<i>Scapharina</i> sp. ....	VR	LOCALITY A397 : Bell Canyon Formation, Pinery	
LOCALITY A373 : Bell Canyon Formation, Lamar			
Member		Member	
<i>Deltarina magnicostata</i> Cooper and Grant.....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard).....	VR
<i>Derbyia</i> sp. 1 .....	VR	<i>Crenispirifer</i> sp. ....	VR
<i>Hustedia opsia</i> Cooper and Grant.....	C	<i>Cyclacantharia</i> sp. ....	VR
<i>Sarganostega pressa</i> Cooper and Grant.....	VR	<i>Derbyia</i> sp. ....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant.....	VR	<i>Echinosteges guadalupensis</i> (Shumard).....	VR
<i>Spiriferellina nuda</i> Cooper and Grant.....	VR	<i>Heteralosia</i> sp. ....	VR
<i>Thedusia ventricosa</i> Cooper and Grant.....	VR	<i>Hustedia rupinata</i> Cooper and Grant.....	R
LOCALITY A375 : Bell Canyon Formation, Pinery			
Member		<i>Metriolepis pedicosa</i> Cooper and Grant.....	VR
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant.....	VR	<i>Micraphelia scitula</i> Cooper and Grant.....	VR
<i>Heteralosia magnispina</i> Cooper and Grant.....	VR	<i>Micraphelia subalata</i> Cooper and Grant.....	C
<i>Paucispinifera</i> sp. ....	VR	<i>Paraspiriferina</i> sp. ....	R
<i>Scapharina levis</i> Cooper and Grant.....	VR	<i>Reticulariina echinata</i> Cooper and Grant.....	VR
LOCALITY A384 : Bell Canyon Formation, Lamar			
Member		<i>Reticulariina</i> sp. ....	VR
<i>Anomaloria anomala</i> Cooper and Grant.....	VR	<i>Scapharina levis</i> Cooper and Grant.....	VR
<i>Astegosia subquadrata</i> (Girty).....	C	<i>Scapharina rugosa</i> Cooper and Grant.....	VR
<i>Composita affinis</i> Girty.....	R	<i>Sestropoma cribriferum</i> Cooper and Grant.....	VR
<i>Geyerella americana</i> Girty.....	VR	<i>Spiriferella sulcifer</i> (Shumard).....	R
<i>Martinia rhomboidalis</i> Girty.....	R	<i>Thedusia trigonalis</i> (Girty).....	VR
<i>Stenoscisma trabeatum</i> Cooper and Grant.....	VR	<i>Thedusia ventricosa</i> Cooper and Grant.....	R
LOCALITY A385 : Bell Canyon Formation, McCombs			
Member		<i>Tropidelasma gregarium</i> (Girty).....	VR
<i>Crenispirifer</i> sp. ....	R	LOCALITY A398 : Bell Canyon Formation, Pinery	
<i>Cyclacantharia</i> sp. ....	VR	Member	
<i>Derbyia</i> sp. 1 .....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant.....	R
<i>Heteralosia magnispina</i> Cooper and Grant.....	VR	<i>Altiplecus, trapezoidalis</i> Cooper and Grant.....	R
<i>Metriolepis</i> sp. ....	VR	<i>Anteridocus swalloviensis</i> (Shumard).....	VR
<i>Paraspiriferina</i> sp. ....	VR	<i>Arionthia lamaria</i> Cooper and Grant.....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Chonetinetes varians</i> Cooper and Grant.....	VR
<i>Sarganostega pressa</i> Cooper and Grant.....	VR	<i>Composita emarginata</i> Girty.....	R
<i>Scapharina rugosa</i> Cooper and Grant.....	VR	<i>Craspedona newelli</i> Cooper and Grant.....	VR
LOCALITY A388 : Bell Canyon Formation, Rader			
Member		<i>Crenispirifer jubatus</i> Cooper and Grant.....	R
<i>Arionthia lamaria</i> Cooper and Grant.....	VR	<i>Crurithyris guadalupensis</i> (Girty).....	R
<i>Astegosia subquadrata</i> (Girty).....	VR	<i>Deltarina magnicostata</i> Cooper and Grant.....	VR
<i>Bryorhynchus bisulcatum</i> (Shumard).....	R	<i>Derbyia</i> sp. ....	VR
<i>Composita affinis</i> Girty.....	VR	<i>Derbyia</i> sp. 1 .....	VR
<i>Composita emarginata</i> Girty.....	VR	<i>Dielasma</i> sp. ....	VR
		<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant.....	R
		<i>Elivina? annectans</i> Cooper and Grant.....	VR
		<i>Hustedia opsia</i> Cooper and Grant.....	R
		<i>Hustedia rupinata</i> Cooper and Grant.....	C
		<i>Hustedia</i> sp. ....	VR
		<i>Meekella skenoides</i> Girty.....	VR

	Rarity code		Rarity code
LOCALITY A398 - Continued			
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Sarganostega pressa</i> Cooper and Grant .....	VI
<i>Micraphelia scitula</i> Cooper and Grant .....	VR	<i>Sarganostega transversalis</i> Cooper and Grant .....	VI
<i>Neophricadothyris</i> sp. ....	VR	<i>Scapharina rugosa</i> Cooper and Grant .....	VI
<i>Ombonia guadalupensis</i> (Girty) .....	VR	<i>Sestropoma cribriferum</i> Cooper and Grant .....	VI
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	R	<i>Spiriferella sulcifer</i> (Shumard) .....	I
<i>Paucispinifera latidorsata</i> (Girty) .....	VR	<i>Spiriferellina nuda</i> Cooper and Grant .....	VF
<i>Paucispinifera spinosa</i> Cooper and Grant .....	C	<i>Tautosia elegans</i> (Girty) .....	VF
<i>Reticulariina echinata</i> Cooper and Grant .....	VR	<i>Thamnosia capitaneensis</i> (Girty) .....	VF
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Thedusia trigonalis</i> (Girty) .....	VF
<i>Sestropoma cribriferum</i> Cooper and Grant .....	C	<i>Thedusia ventricosa</i> Cooper and Grant .....	F
<i>Spiriferella sulcifer</i> (Shumard) .....	VR	LOCALITY A404 : Bell Canyon Formation, Rader	
<i>Tautosia shumardiana</i> (Girty) .....	VR	Member	
<i>Thamnosia capitaneensis</i> (Girty) .....	VR	<i>Acanthocrania</i> sp. ....	VR
<i>Thedusia trigonalis</i> (Girty) .....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant .....	R
		<i>Altiplecus trapezoidalis</i> Cooper and Grant .....	VR
LOCALITY A401 : Bell Canyon Formation, Pinery		<i>Arionthia lamaria</i> Cooper and Grant .....	VR
Member		<i>Chonetinetes varians</i> Cooper and Grant .....	VR
<i>Anteridocus bicostatus</i> Cooper and Grant .....	VR	<i>Cyclacantharia</i> sp. 5 .....	VR
<i>Anteridocus swalloviaus</i> (Shumard) .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Collemataria spatulata</i> Cooper and Grant .....	VR	<i>Heteralosia magnispina</i> Cooper and Grant .....	VR
<i>Composita emarginata</i> Girty .....	VR	<i>Hustedia rupinata</i> Cooper and Grant .....	R
<i>Deltarina magnicostata</i> Cooper and Grant .....	VR	<i>Micraphelia subalata</i> Cooper and Grant .....	R
<i>Elivina detecta</i> Cooper and Grant .....	VR	<i>Paraspiriferina sapinea</i> Cooper and Grant .....	R
<i>Heteralosia paucispinosa</i> Cooper and Grant .....	VR	<i>Plectelasma guadalupense</i> (Girty) .....	VR
<i>Holusia regularis</i> Cooper and Grant .....	VR	<i>Scapharina rugosa</i> Cooper and Grant .....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	VR	<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR
<i>Paucispinifera latidorsata</i> (Girty) .....	VR	<i>Spiriferella sulcifer</i> (Shumard) .....	VR
<i>Rhamnaria shumardi</i> Cooper and Grant .....	VR	<i>Thedusia ventricosa</i> Cooper and Grant .....	R
<i>Scapharina rugosa</i> Cooper and Grant .....	R	LOCALITY A409 : Bell Canyon Formation, McCombs	
<i>Spiriferella</i> sp. ....	VR	Member	
<i>Tautosia elegans</i> (Girty) .....	VR	<i>Acanthocrania</i> sp. ....	VR
<i>Tautosia shumardiana</i> (Girty) .....	VR	<i>Collemataria spatulata</i> Cooper and Grant .....	VR
<i>Thamnosia capitaneensis</i> (Girty) .....	VR	<i>Ctenalosia fixata</i> Cooper and Stehli .....	VR
<i>Thedusia ventricosa</i> Cooper and Grant .....	R	<i>Derbyia</i> sp. ....	VR
LOCALITY A402 : Cherry Canyon Formation,		<i>Eolyttonia</i> sp. ....	VR
Manzanita Member		<i>Hustedia opsia</i> Cooper and Grant .....	R
<i>Composita</i> sp. ....	R	<i>Hustedia</i> sp. ....	VR
<i>Derbyia</i> sp. ....	VR	<i>Meekella skenoides</i> Girty .....	VR
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Paucispinifera</i> sp. ....	VR
LOCALITY A403 : Bell Canyon Formation, Rader		<i>Pseudodielasma pinyonense</i> Cooper and Grant .....	VR
Member		<i>Rhamnaria shumardi</i> Cooper and Grant .....	VR
<i>Aphaurosia rotundata</i> Cooper and Grant .....	VR	<i>Thedusia ventricosa</i> Cooper and Grant .....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	<i>Xenosteges quadratus</i> Cooper and Grant .....	VR
<i>Bryorhynchus bisulcatum</i> (Shumard) .....	C	LOCALITY A410 : Bell Canyon Formation, Rader	
<i>Composita emarginata</i> Girty .....	VR	Member	
<i>Craspedona newelli</i> Cooper and Grant .....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant .....	R
<i>Crenispirifer jubatus</i> Cooper and Grant .....	R	<i>Arionthia lamaria</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	R
<i>Derbyia texta</i> Cooper and Grant .....	VR	<i>Cartorhium</i> sp. ....	VR
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	R	<i>Chonetinetes varians</i> Cooper and Grant .....	VR
<i>Echinosteges guadalupensis</i> (Shumard) .....	VR	<i>Composita affinis</i> Girty .....	VR
<i>Elivina? annectans</i> Cooper and Grant .....	R	<i>Composita emarginata</i> Girty .....	VR
<i>Hustedia demissa</i> Cooper and Grant .....	VR	<i>Composita pyriformis</i> Cooper and Grant .....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Crenispirifer jubatus</i> Cooper and Grant .....	R
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	R
<i>Micraphelia scitula</i> Cooper and Grant .....	R	<i>Deltarina magnicostata</i> Cooper and Grant .....	VR
<i>Micraphelia subalata</i> Cooper and Grant .....	C	<i>Dielasma sulcatum</i> Girty .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	R	<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	VR
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	VR	<i>Echinosteges guadalupensis</i> (Shumard) .....	VR
<i>Paucispinifera latidorsata</i> (Girty) .....	VR	<i>Eliva shumardi</i> Cooper and Grant .....	VR
<i>Phrenophoria perplexa</i> Cooper and Grant .....	VR	<i>Elivina? annectans</i> Cooper and Grant .....	VR
<i>Reticulariina laxa</i> (Girty) .....	VR	<i>Fascicosta bella</i> Cooper and Grant .....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Fascicosta longaeva</i> (Girty) .....	VR

	Rarity code		Rarity code
LOCALITY A410 - Continued			
<i>Heteralosia magnispina</i> Cooper and Grant	VR	<i>Tautosia elegans</i> (Girty)	VR
<i>Heteralosia</i> sp. 6	VR	<i>Tautosia shumardiana</i> (Girty)	VR
<i>Hustedia demissa</i> Cooper and Grant	VR	<i>Tropidelasma gregarium</i> (Girty)	R
<i>Hustedia opsia</i> Cooper and Grant	VR	LOCALITY A435 : Bell Canyon Formation, Pinery	
<i>Hustedia rupinata</i> Cooper and Grant	C	Member	
<i>Metriolepis nabis</i> Cooper and Grant	VR	<i>Bryorhynchus bisulcatum</i> (Shumard)	VR
<i>Metriolepis</i> sp.	VR	<i>Composita</i> sp.	VR
<i>Micraphelia scitula</i> Cooper and Grant	R	<i>Crenispirifer jubatus</i> Cooper and Grant	VR
<i>Micraphelia subalata</i> Cooper and Grant	C	<i>Derbyia</i> sp.	VR
<i>Paraspiriferina billingsi</i> (Shumard)	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>intrepidus</i> Cooper and Grant	VR
<i>Paucispinifera</i> sp.	VR	<i>Hustedia rupinata</i> Cooper and Grant	R
<i>Reticulariina echinata</i> Cooper and Grant	VR	<i>Hustedia</i> sp.	VR
<i>Reticulariina phoxa</i> Cooper and Grant	VR	<i>Micraphelia scitula</i> Cooper and Grant	VR
<i>Reticulariina</i> sp.	R	<i>Paraspiriferina sapinea</i> Cooper and Grant	VR
<i>Sarganostega transversalis</i> Cooper and Grant	VR	<i>Reticulariina</i> sp.	VR
<i>Scapharina rugosa</i> Cooper and Grant	R	<i>Sarganostega transversalis</i> Cooper and Grant	VR
<i>Sestropoma cribriferum</i> Cooper and Grant	R	<i>Sestropoma cribriferum</i> Cooper and Grant	VR
<i>Spiriferella sulcifer</i> (Shumard)	R	<i>Spiriferellina nuda</i> Cooper and Grant	VR
<i>Thamnosia capitanensis</i> (Girty)	VR	<i>Thamnosia capitanensis</i> (Girty)	VR
<i>Thedusia ventricosa</i> Cooper and Grant	R	<i>Thedusia trigonalis</i> (Girty)	VR
<i>Tropidelasma gregarium</i> (Girty)	R	<i>Tropidelasma gregarium</i> (Girty)	VR
LOCALITY A414 : Cherry Canyon Formation, South Wells Member		LOCALITY A437 : Bell Canyon Formation, Pinery	
<i>Glossothyropsis robusta</i> (Girty)	VR	Member	
<i>Leiorhynchoidea sulcata</i> Cooper and Grant	R	<i>Altiplecus trapezoidalis</i> Cooper and Grant	VR
LOCALITY A417 : Carlsbad Formation?		<i>Arionthia lamaria</i> Cooper and Grant	VR
<i>Anteridocus bicostatus</i> Cooper and Grant	VR	<i>Composita pyriformis</i> Cooper and Grant	VR
<i>Arionthia lamaria</i> Cooper and Grant	VR	<i>Crenispirifer jubatus</i> Cooper and Grant	R
<i>Cyclacantharia</i> sp. 6	R	<i>Derbyia</i> sp.	R
<i>Echinauris</i> sp.	VR	<i>Dielasma</i> sp.	VR
<i>Hustedia opsia</i> Cooper and Grant	C	<i>Elivina? annectans</i> Cooper and Grant	R
<i>Meekella skenoides</i> Girty	VR	<i>Hustedia demissa</i> Cooper and Grant	R
<i>Paraspiriferina</i> sp.	R	<i>Hustedia opsia</i> Cooper and Grant	VR
<i>Paucispinifera</i> sp.	VR	<i>Hustedia rupinata</i> Cooper and Grant	C
LOCALITY A430 : Bell Canyon Formation, Lamar Member		<i>Micraphelia scitula</i> Cooper and Grant	VR
<i>Allorhynchus venustum</i> Cooper and Grant	VR	<i>Paraspiriferina sapinea</i> Cooper and Grant	C
<i>Anomaloria anomala</i> Cooper and Grant	VR	<i>Reticulariina welleri</i> (Girty)	VR
<i>Aphaurosia rotundata</i> Cooper and Grant	VR	<i>Sestropoma cribriferum</i> Cooper and Grant	VR
<i>Aphaurosia scutata</i> Cooper and Grant	VR	<i>Spiriferellina nuda</i> Cooper and Grant	VR
<i>Arionthia lamaria</i> Cooper and Grant	VR	<i>Thedusia trigonalis</i> (Girty)	VR
<i>Astegosia subquadrata</i> (Girty)	R	<i>Thedusia ventricosa</i> Cooper and Grant	VR
<i>Collemataria spatulata</i> Cooper and Grant	R	LOCALITY A475 : Capitan Formation	
<i>Composita affinis</i> Girty	R	<i>Cartorhium mexicanum</i> (Shumard)	R
<i>Crurithyris guadalupensis</i> (Girty)	R	<i>Composita emarginata</i> Girty	VR
<i>Deltarina magnicostata</i> Cooper and Grant	VR	<i>Eolyttonia</i> sp.	VR
<i>Derbyia</i> sp. 1	R	<i>Liosotella popei</i> (Shumard)	VR
<i>Dielasma</i> sp.	VR	<i>Pseudoleptodus guadalupensis</i> (Stehli)	R
<i>Dielasma sulcatum</i> Girty	VR	<i>Stenosisma trabeatum</i> Cooper and Grant	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>hillanus</i> (Girty)	VR	<i>Thamnosia capitanensis</i> (Girty)	VR
<i>Fascicosta elongata</i> Cooper and Grant	VR	LOCALITY A492 : Bone Spring Formation	
<i>Heteralosia magnispina</i> Cooper and Grant	VR	<i>Acosarina mesoplatys</i> (R.E. King)	A
<i>Hustedia opsia</i> Cooper and Grant	R	<i>Antronaria dissona</i> Cooper and Grant	C
<i>Martinia rhomboidalis</i> Girty	VR	<i>Antronaria specialis</i> Cooper and Grant	C
<i>Ombonia guadalupensis</i> (Girty)	C	<i>Antronaria spectabilis</i> Cooper and Grant	C
<i>Paraspiriferina billingsi</i> (Shumard)	R	<i>Chonosteges limbatus</i> Cooper and Grant	VR
<i>Ptilotorhynchus delicatum</i> Cooper and Grant	VR	<i>Chonosteges variabilis</i> Cooper and Grant	VR
<i>Reticulariina</i> sp.	VR	<i>Composita cracens</i> Cooper and Grant	R
<i>Rigbyella girtyi</i> (Wanner and Sieverts)	VR	<i>Composita</i> sp.	R
<i>Sarganostega pressa</i> Cooper and Grant	VR	<i>Cyclacantharia</i> sp.	VR
<i>Scapharina levis</i> Cooper and Grant	VR	<i>Derbyia</i> sp.	VR
<i>Stenosisma trabeatum</i> Cooper and Grant	VR	<i>Diplanus lamellatus</i> (R.E. King)	VR
		<i>Dyoros</i> ( <i>Lissosia</i> ) <i>vagabundus</i> Cooper and Grant	VR
		<i>Echinauris</i> sp.?	VR



	Rarity code		Rarity code
LOCALITY A492 - Continued		<i>Antronaria voluminosa</i> Cooper and Grant .....	VR
<i>Enteleles leonardensis</i> R.E. King .....	R	<i>Composita cracens</i> Cooper and Grant .....	R
<i>Enteleles subcircularis</i> Cooper and Grant .....	R	<i>Crenispirifer angulatus</i> (R.E. King) .....	R
<i>Glyptosteges insculptus</i> Cooper and Grant .....	R	<i>Derbyia</i> sp. ....	VR
<i>Gypospirifer infraplicus</i> (R.E. King) .....	VR	<i>Eolyttonia pocillata</i> Cooper and Grant .....	VR
<i>Hercosia uddeni</i> (Böse) .....	VR	<i>Hustedia hessensis</i> R.E. King .....	R
<i>Heterelasma sulcificatum</i> Cooper and Grant .....	R	<i>Isogramma</i> sp. ....	VR
<i>Hustedia ampullacea</i> Cooper and Grant .....	R	<i>Kozlowskia kingi</i> Stehli .....	VR
<i>Hustedia decollatensis</i> Cooper and Grant .....	R	<i>Kozlowskia</i> sp. ....	VR
<i>Linoproductus</i> sp. ....	VR	<i>Meekella hessensis</i> R.E. King .....	VR
<i>Meekella hessensis</i> R.E. King .....	C	<i>Pseudoleptodus</i> sp. ....	VR
<i>Neophricadothyris</i> sp. ....	R	<i>Reticulariina</i> sp. ....	VR
<i>Nudauris</i> sp. ....	VR	<i>Rhipidomella hessensis</i> R.E. King .....	R
<i>Peniculauris imitata</i> Cooper and Grant .....	VR	<i>Rhipidomella hispidula</i> Cooper and Grant .....	VR
<i>Petasmatherus</i> sp. ....	VR	<i>Spinifrons magna</i> Cooper and Grant .....	VR
<i>Rhamnaria</i> sp. ....	VR	<i>Stenosisma levicostum</i> Cooper and Grant .....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	C	<i>Wellerella? nitidula</i> Cooper and Grant .....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	R	LOCALITY A500 : Cathedral Mountain Formation	
<i>Spinifrons magna</i> Cooper and Grant .....	VR	<i>Acanthocrania</i> sp. ....	VR
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	A
<i>Stenosisma levicostum</i> Cooper and Grant .....	R	<i>Anteridocus erugatus</i> Cooper and Grant .....	VR
<i>Stenosisma</i> sp. ....	R	<i>Anteridocus gongylus</i> Cooper and Grant .....	R
<i>Wellerella? nitidula</i> Cooper and Grant .....	C	<i>Antronaria speciosa</i> Cooper and Grant .....	VR
LOCALITY A496 : Cherry Canyon Formation, Getaway Member		<i>Cartorhium latum</i> (R.E. King) .....	C
<i>Allorhynchus permianum permianum</i> Stehli .....	VR	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR
<i>Allorhynchus</i> sp. ....	R	<i>Choanodus irregularis</i> Cooper and Grant .....	R
<i>Bothrionia pulchra</i> Cooper and Grant .....	VR	<i>Choanodus perfectus</i> Cooper and Grant .....	VR
<i>Cartorhium retusum</i> Cooper and Grant .....	VR	<i>Chondronia bella</i> Cooper and Grant .....	R
<i>Composita parasulcata</i> Cooper and Grant .....	R	<i>Chonosteges pulcher</i> Cooper and Grant .....	R
<i>Composita prospera</i> Cooper and Grant .....	VR	<i>Chonosteges variabilis</i> Cooper and Grant .....	R
<i>Crurithyris tholiaphor</i> Cooper and Grant .....	R	<i>Collemataria gregaria</i> Cooper and Grant .....	C
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	C	<i>Composita bucculenta</i> Cooper and Grant .....	VR
<i>Cyclacantharia robusta</i> Cooper and Grant .....	VR	<i>Composita imbricata</i> Cooper and Grant .....	R
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	R
<i>Dielasma</i> sp. ....	VR	<i>Compressoproductus curtus</i> Cooper and Grant .....	VR
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	R	<i>Coscinophora nodosa</i> (Cooper and Stehli) .....	R
<i>Dyoros (Tetragonetes) complanatus</i> Cooper and Grant .....	R	<i>Derbyia complicata</i> Cooper and Grant .....	VR
<i>Echinauris productelloides</i> Cooper and Grant .....	C	<i>Derbyia informis</i> Cooper and Grant .....	R
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	C
<i>Eolyttonia progressa</i> Cooper and Grant .....	R	<i>Dielasma</i> sp. ....	VR
<i>Grandaurispina undulata</i> Cooper and Grant .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	R
<i>Hustedia citeria</i> Cooper and Grant .....	C	<i>Dyoros (Dyoros) extensiformis</i> Cooper and Grant .....	VR
<i>Hustedia hapala</i> Cooper and Grant .....	R	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	VR
<i>Hustedia tomea</i> Cooper and Grant .....	VR	<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant .....	R
<i>Leiorhynchoidea scelestia</i> Cooper and Grant .....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	C
<i>Liosotella wordensis</i> (R.E. King) .....	C	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R
<i>Meekella skenoides</i> Girty .....	R	<i>Enteleles leonardensis</i> R.E. King .....	A
<i>Metriolepis exserta</i> Cooper and Grant .....	VR	<i>Enteleles plummeri</i> R.E. King .....	VR
<i>Neophricadothyris conara</i> Cooper and Grant .....	VR	<i>Eolyttonia circularis</i> Cooper and Grant .....	R
<i>Paraspiriferina paginata</i> Cooper and Grant .....	VR	<i>Eolyttonia pocillata</i> Cooper and Grant .....	C
<i>Paucispiniifera tumida</i> Cooper and Grant .....	VR	<i>Goniarina futilis</i> Cooper and Grant .....	R
<i>Petasmatherus opulus</i> Cooper and Grant .....	VR	<i>Hercosia uddeni</i> (Böse) .....	C
<i>Pseudodielasma magnum</i> Cooper and Grant .....	R	<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR
<i>Pseudodielasma</i> sp. ....	VR	<i>Hustedia ampullacea</i> Cooper and Grant .....	VR
<i>Reticulariina girtyi</i> Cooper and Grant .....	R	<i>Hustedia lusca</i> Cooper and Grant .....	A
<i>Rhamnaria sulcata</i> Cooper and Grant .....	R	<i>Hustedia spicata</i> Cooper and Grant .....	C
<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR	<i>Institella leonardensis</i> (R.E. King) .....	A
<i>Thedusia dischides</i> Cooper and Grant .....	VR	<i>Lepidospirifer angulatus</i> Cooper and Grant .....	VR
<i>Undulella guadalupensis</i> Cooper and Grant .....	R	<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR
<i>Wellerella girtyi seorsa</i> Cooper and Grant .....	C	<i>Lepidospirifer inferus</i> Cooper and Grant .....	VR
LOCALITY A497 : Bone Spring Formation		<i>Linoproductus delicatus</i> Cooper and Grant .....	VR
<i>Antronaria mesicostalis</i> (Girty) .....	VR	<i>Loxophragmus ellipticus</i> Cooper and Grant .....	C
<i>Antronaria spectabilis</i> Cooper and Grant .....	R	<i>Martinia miranda</i> Cooper and Grant .....	R
		<i>Meekella calathica</i> Cooper and Grant .....	A
		<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR



	Rarity code		Rarity code
LOCALITY A500 - Continued			
<i>Metriolepis carotica</i> Cooper and Grant	R	<i>Edriosteges</i> sp.	VR
<i>Metriolepis tegulata</i> Cooper and Grant	R	<i>Eolyttonia</i> sp.	R
<i>Neophricadothyris bullata</i> Cooper and Grant	C	<i>Hercosestria cribrata</i> Cooper and Grant	VR
<i>Neospirifer mansuetus</i> Cooper and Grant	R	<i>Hustedia consuta</i> Cooper and Grant	R
<i>Niviconia globosa</i> (R.E. King)	A	<i>Hustedia narinosa</i> Cooper and Grant	C
<i>Peniculauris subcostata</i> (R.E. King)	VR	<i>Hustedia</i> sp.	VR
<i>Petasmaia expansa</i> Cooper and Grant	R	<i>Isogramma</i> sp.	VR
<i>Pontisia stehlii stehlii</i> Cooper and Grant	VR	<i>Meekella calathica</i> Cooper and Grant	C
<i>Pontisia stehlii tumidosa</i> Cooper and Grant	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper	R
<i>Rallacosta actina</i> Cooper and Grant	VR	<i>Metriolepis tegulata</i> Cooper and Grant	VR
<i>Reticulariina</i> sp.	VR	<i>Neophricadothyris bullata</i> Cooper and Grant	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant	VR	<i>Neophricadothyris crassibacca</i> Cooper and Grant	VR
<i>Rhipidomella hispidula</i> Cooper and Grant	A	<i>Neospirifer bakeri bakeri</i> R.E. King	R
<i>Rugatia paraindica</i> (McKee)	VR	<i>Neospirifer formulosus</i> Cooper and Grant	VR
<i>Spiriferellina tricola</i> Cooper and Grant	VR	<i>Niviconia globosa</i> (R.E. King)	VR
<i>Stenoscisma doricranum</i> Cooper and Grant	VR	<i>Paucispinifera sulcata</i> Cooper and Grant	VR
<i>Stenoscisma triquetrum</i> Cooper and Grant	VR	<i>Peniculauris costata</i> Cooper and Grant	VR
<i>Tautosia fastigiata</i> Cooper and Grant	VR	<i>Rhamnaria tenuispinosa</i> Cooper and Grant	VR
<i>Texarina wordensis</i> (R.E. King)	VR	<i>Rhynchopora hebetata</i> Cooper and Grant	VR
<i>Thedusia bucrenata</i> Cooper and Grant	VR	<i>Rugatia mckeei</i> Cooper and Grant	VR
<i>Torynechus caelatus</i> Cooper and Grant	VR	<i>Stenoscisma camurum</i> Cooper and Grant	VR
<i>Trophisina fenaria</i> Cooper and Grant	VR	<i>Stenoscisma triquetrum</i> Cooper and Grant	R
<i>Xenosteges adherens</i> Muir-Wood and Cooper	C	<i>Thedusia mesocostata</i> Cooper and Grant	R
LOCALITY A501 : Road Canyon Formation			
<i>Acosarina mesoplatys</i> (R.E. King)	C	<i>Tropidolasma corniculum</i> Cooper and Grant	VR
<i>Antronaria speciosa</i> Cooper and Grant	VR	<i>Waagenoconcha convexa</i> Cooper and Grant	VR
<i>Composita bucculenta</i> Cooper and Grant	R	<i>Yakovlevia immatura</i> Cooper and Grant	VR
<i>Composita</i> sp.	R	LOCALITY A504 : Cathedral Mountain Formation	
<i>Cooperina subcuneata</i> Cooper and Grant	VR	<i>Anteridocus gongylus</i> Cooper and Grant	VR
<i>Derbyia laqueata</i> Cooper and Grant	VR	<i>Cartorhium latum</i> (R.E. King)	VR
<i>Derbyia</i> sp.	VR	<i>Choanodus perfectus</i> Cooper and Grant	VR
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant	VR	<i>Chonosteges pulcher</i> Cooper and Grant	VR
<i>Echinauris irregularis</i> Cooper and Grant	VR	<i>Chonosteges variabilis</i> Cooper and Grant	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper	VR	<i>Collemataria gregaria</i> Cooper and Grant	VR
<i>Hercosestria cribrata</i> Cooper and Grant	VR	<i>Composita crassa</i> Cooper and Grant	C
<i>Hercosia uddeni</i> (Böse)	VR	<i>Derbyia</i> sp.	VR
<i>Hustedia lusca</i> Cooper and Grant	C	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant	R
<i>Hustedia spicata</i> Cooper and Grant	VR	<i>Eolyttonia circularis</i> Cooper and Grant	VR
<i>Institella leonardensis</i> (R.E. King)	VR	<i>Hustedia lusca</i> Cooper and Grant	R
<i>Meekella calathica</i> Cooper and Grant	R	<i>Hustedia spicata</i> Cooper and Grant	VR
<i>Rhipidomella hispidula</i> Cooper and Grant	VR	<i>Lepidospirifer demissus</i> Cooper and Grant	VR
<i>Spiriferellina tricola</i> Cooper and Grant	VR	<i>Martinia miranda</i> Cooper and Grant	R
<i>Stenoscisma aptatum</i> Cooper and Grant	VR	<i>Meekella calathica</i> Cooper and Grant	R
<i>Xenosteges trivialis</i> Cooper and Grant	VR	<i>Meekella</i> sp.	VR
LOCALITY A503 : Road Canyon Formation			
<i>Acosarina mesoplatys</i> (R.E. King)	R	<i>Metriolepis tegulata</i> Cooper and Grant	VR
<i>Ametoria residua</i> Cooper and Grant	VR	<i>Neophricadothyris bullata</i> Cooper and Grant	R
<i>Collemataria</i> sp.	R	<i>Niviconia globosa</i> (R.E. King)	VR
<i>Composita crassa</i> Cooper and Grant	R	<i>Rhamnaria tenuispinosa</i> Cooper and Grant	VR
<i>Cyclacantharia paucispinosa</i> Cooper and Grant	R	<i>Rhipidomella hispidula</i> Cooper and Grant	VR
<i>Cyclacantharia transitoria</i> Cooper and Grant	VR	<i>Rugatia paraindica</i> (McKee)	VR
<i>Derbyia cincinnata</i> Cooper and Grant	VR	<i>Texarina wordensis</i> (R.E. King)	VR
<i>Derbyia informis</i> Cooper and Grant	VR	<i>Torynechus caelatus</i> Cooper and Grant	VR
<i>Dielasma ellipsoideum</i> Cooper and Grant	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper	R
<i>Dyoros (Dyoros) angulatus</i> Cooper and Grant	VR	LOCALITY A505 : Word Formation, Willis Ranch	
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant	R	Member	
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant	VR	<i>Allorhynchus permianum wordense</i> Cooper and Grant	R
<i>Dyoros (Tetragonetes) solidus</i> Cooper and Grant	R	<i>Allorhynchus triangulatum</i> Cooper and Grant	VR
<i>Echinauris irregularis</i> Cooper and Grant	VR	<i>Cactosteges anomalus</i> Cooper and Grant	VR
<i>Echinauris lappacea</i> Cooper and Grant	VR	<i>Cancrinella subquadrata</i> Cooper and Grant	VR
<i>Echinauris liumbona</i> Cooper and Grant	VR	<i>Collemataria elongata</i> Cooper and Grant	C
<i>Echinauris parva</i> Cooper and Grant	C	<i>Composita enormis</i> Cooper and Grant	C
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper	VR	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud	R
		<i>Cyclacantharia kingorum</i> Cooper and Grant	A
		<i>Derbyia filosa</i> Cooper and Grant	VR
		<i>Derbyia texta</i> Cooper and Grant	C

	Rarity code		Rarity code
LOCALITY A505 - Continued		<i>Tropidlasma anthicum</i> Cooper and Grant .....	VR
<i>Dielasma adamanteum</i> Cooper and Grant .....	R	<i>Xenosteges quadratus</i> Cooper and Grant .....	VR
<i>Dielasma zebratum</i> Cooper and Grant .....	R	LOCALITY A507 : Road Canyon Formation	
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	A	<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	R	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	C	<i>Cenorhynchia parvula</i> Cooper and Grant .....	VR
<i>Echinosteges tuberculatus</i> (R.E. King) .....	C	<i>Composita stalagmium</i> Cooper and Grant .....	C
<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	VR	<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	R
<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	C	<i>Derbyia cincinnata</i> Cooper and Grant .....	VR
<i>Heteralosia hystricula</i> (Girty) .....	C	<i>Derbyia laqueata</i> Cooper and Grant .....	R
<i>Heterelasma concavum</i> Cooper and Grant .....	VR	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	R
<i>Hustedia pugilla pugilla</i> Cooper and Grant .....	C	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR
<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	VR	<i>Hercosestria cribrata</i> Cooper and Grant .....	SA
<i>Liosotella wordensis</i> (R.E. King) .....	VA	<i>Holotricharina hirsuta</i> Cooper and Grant .....	C
<i>Meekella skenoides</i> Girty .....	A	<i>Hustedia connorsi</i> Cooper and Grant .....	A
<i>Megousia definita</i> Cooper and Grant .....	R	<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	VR
<i>Paraspiriferina setulosa</i> Cooper and Grant .....	C	<i>Meekella calathica</i> Cooper and Grant .....	C
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	A	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Phrenophoria subcarinata</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	C
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	A	<i>Neospirifer thescelus</i> Cooper and Grant .....	R
<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	C
<i>Spiriferella calcarata</i> Cooper and Grant .....	R	<i>Petasmatherus nitidus</i> Cooper and Grant .....	VR
<i>Spiriferellina hilli</i> (Girty) .....	R	<i>Reticulariina craticula</i> Cooper and Grant .....	C
<i>Thedusia procera</i> Cooper and Grant .....	C	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR
<i>Undulella undulata</i> Cooper and Grant .....	C	<i>Rhamnaria vinnula</i> Cooper and Grant .....	VR
<i>Waagenoconcha magnifica</i> Cooper and Grant .....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR
<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	A	<i>Stenosisma triquetrum</i> Cooper and Grant .....	R
<i>Xenosteges quadratus</i> Cooper and Grant .....	R	<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Yakovlevia hessorum</i> Cooper and Grant .....	C	<i>Tschernyschewia</i> sp. ....	VR
LOCALITY A506 : Word Formation, Willis Ranch		LOCALITY A509 : Road Canyon Formation	
Member		<i>Composita crassa</i> Cooper and Grant .....	VR
<i>Acanthocrania intermedia</i> Cooper and Grant .....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	VR
<i>Cactosteges anomalus</i> Cooper and Grant .....	R	<i>Dielasma emarginatum</i> Cooper and Grant .....	VR
<i>Collemataria elongata</i> Cooper and Grant .....	C	<i>Dyoros (Dyoros) angulatus</i> Cooper and Grant .....	R
<i>Composita parasulcata</i> Cooper and Grant .....	VR	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	VR
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	R	<i>Dyoros (Lissosia) parvus</i> Cooper and Grant .....	R
<i>Costispinifera costata</i> (R.E. King) .....	C	<i>Echinauris bella</i> Cooper and Grant .....	R
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	C	<i>Heterelasma glansfagea</i> Cooper and Grant .....	R
<i>Derbyia filosa</i> Cooper and Grant .....	VR	<i>Hustedia consuta</i> Cooper and Grant .....	C
<i>Derbyia pannucia</i> Cooper and Grant .....	R	<i>Hustedia cuneata</i> Cooper and Grant .....	R
<i>Derbyia texta</i> Cooper and Grant .....	VR	<i>Liosotella costata</i> Cooper and Grant .....	VR
<i>Dielasma adamanteum</i> Cooper and Grant .....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	R
<i>Dielasma zebratum</i> Cooper and Grant .....	VR	<i>Metriolepis ziczac</i> Cooper and Grant .....	VR
<i>Dyoros (Dyoros) tenuis</i> Cooper and Grant .....	R	<i>Neospirifer bakeri bakeri</i> R.E. King .....	R
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	VR
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR	<i>Rhynchopora sphenoides</i> Cooper and Grant .....	VR
<i>Enteleles wordensis</i> R.E. King .....	C	<i>Spiriferella</i> sp. ....	VR
<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	R	<i>Tautosia galbina</i> Cooper and Grant .....	VR
<i>Heteralosia hystricula</i> (Girty) .....	C	<i>Yakovlevia sulcata</i> Cooper and Grant .....	R
<i>Heterelasma concavum</i> Cooper and Grant .....	VR	LOCALITY A512 : Cherry Canyon Formation, Getaway	
<i>Hustedia pugilla pugilla</i> Cooper and Grant .....	R	Member	
<i>Hustedia sculptilis</i> Cooper and Grant .....	VR	<i>Acanthocrania conferta</i> Cooper and Grant .....	VR
<i>Liosotella wordensis</i> (R.E. King) .....	C	<i>Allorhynchus permianum permianum</i> Stehli .....	R
<i>Meekella skenoides</i> Girty .....	C	<i>Bothrionia guadalupensis</i> Cooper and Grant .....	C
<i>Megousia definita</i> Cooper and Grant .....	VR	<i>Bryorhynchus gratiosum</i> (Girty) .....	VR
<i>Megousia flexuosa</i> Cooper and Grant .....	VR	<i>Cancrinella</i> sp. ....	VR
<i>Metriolepis pulvinata</i> Cooper and Grant .....	R	<i>Cartorhium retusum</i> Cooper and Grant .....	R
<i>Neospirifer amphigyus</i> Cooper and Grant .....	VR	<i>Cenorhynchia nasuta</i> Cooper and Grant .....	R
<i>Paraspiriferina laqueata</i> Cooper and Grant .....	R	<i>Composita parasulcata</i> Cooper and Grant .....	R
<i>Paucispinifera transversa</i> Cooper and Grant .....	R	<i>Composita prospera</i> Cooper and Grant .....	A
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	R	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR
<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR	<i>Craspedona newelli</i> Cooper and Grant .....	VR
<i>Spiriferellina hilli</i> (Girty) .....	C	<i>Crurithyris</i> sp. ....	VR
<i>Thedusia procera</i> Cooper and Grant .....	R		

LOCALITY A512 - Continued	Rarity code
<i>Crurithyris tholiaphor</i> Cooper and Grant	C
<i>Ctenalosis fixata</i> Cooper and Stehli	C
<i>Cyclacantharia robusta</i> Cooper and Grant	VA
<i>Derbyia filosa</i> Cooper and Grant	C
<i>Derbyia pannucia</i> Cooper and Grant	R
<i>Derbyia texta</i> Cooper and Grant	A
<i>Dielasma ligonorum</i> Cooper and Grant	R
<i>Dielasma pictile</i> Cooper and Grant	C
<i>Dielasma</i> sp.	C
<i>Divaricosta squarrosa</i> Cooper and Grant	R
<i>Dyoros (Dyoros) convexus</i> Cooper and Grant	VA
<i>Dyoros (Tetragonetes) auriculatus</i> Cooper and Grant	VR
<i>Dyoros (Tetragonetes) subquadratus</i> Cooper and Grant	C
<i>Echinauris productelloides</i> Cooper and Grant	C
<i>Echinosteges tuberculatus</i> (R.E. King)	VR
<i>Eolyttonia progressa</i> Cooper and Grant	C
<i>Glossothyropsis</i> sp. (Girty)	VR
<i>Grandaurispina rudis</i> Cooper and Grant	C
<i>Heteralosis magnispina</i> Cooper and Grant	C
<i>Heterelasma concavum</i> Cooper and Grant	VR
<i>Hustedia citeria</i> Cooper and Grant	VA
<i>Hustedia hapala</i> Cooper and Grant	A
<i>Hustedia tomea</i> Cooper and Grant	C
<i>Leiorhynchoidea scelestia</i> Cooper and Grant	C
<i>Leurosina delicata</i> Cooper and Grant	C
<i>Liosotella spinumbona</i> Cooper and Grant	A
<i>Liosotella wordensis</i> (R.E. King)	C
<i>Madarosia pentagona</i> Cooper and Grant	VR
<i>Meekella skenoides</i> Girty	A
<i>Megousia definita</i> Cooper and Grant	VR
<i>Metriolepis exserta</i> Cooper and Grant	C
<i>Metriolepis</i> sp.	VR
<i>Paranorella</i> sp. 3	VR
<i>Paraspiriferina paginata</i> Cooper and Grant	C
<i>Paucispinifera</i> sp.	VR
<i>Paucispinifera tumida</i> Cooper and Grant	C
<i>Petasmatherus recticardatus</i> Cooper and Grant	VR
<i>Petrocrania teretis</i> Cooper and Grant	VR
<i>Phrenophoria irregularis</i> Cooper and Grant	R
<i>Phrenophoria pinguiformis</i> Cooper and Grant	R
<i>Polymorpharia polymorpha</i> Cooper and Grant	R
<i>Pseudodielasma magnum</i> Cooper and Grant	VR
<i>Pseudodielasma</i> sp.	R
<i>Ptygmactrum</i> sp.	VR
<i>Ptygmactrum spiculatum</i> Cooper and Grant	VR
<i>Reticulariina roscida</i> Cooper and Grant	A
<i>Rhamnaria sulcata</i> Cooper and Grant	C
<i>Rhynchopora guadalupensis</i> Cooper and Grant	VR
<i>Sestropoma cribriferum</i> Cooper and Grant	R
<i>Spiriferella gloverae</i> Cooper and Grant	R
<i>Stenosisma</i> sp.	R
<i>Strophalosis inexpectans</i> Cooper and Grant	VR
<i>Tautosia transenna</i> Cooper and Grant	C
<i>Thedusia dischides</i> Cooper and Grant	VA
<i>Tropidelasma furcillatum</i> Cooper and Grant	R
<i>Waagenoconcha magnifica</i> Cooper and Grant	R
<i>Wellerella girtyi seorsa</i> Cooper and Grant	VR
<i>Xenosteges anomalus</i> Cooper and Grant	C
<i>Xenosteges quadratus</i> Cooper and Grant	C
<i>Yakovlevia costellata</i> Cooper and Grant	VR
LOCALITY A519 : Cherry Canyon Formation, Getaway Member	
<i>Acanthocrania</i> sp.	VR

	Rarity code
<i>Bothrionia pulchra</i> Cooper and Grant	VR
<i>Cartorhium retusum</i> Cooper and Grant	VR
<i>Composita parasulcata</i> Cooper and Grant	VR
<i>Composita prospera</i> Cooper and Grant	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant	R
<i>Derbyia texta</i> Cooper and Grant	R
<i>Dielasma pictile</i> Cooper and Grant	VR
<i>Dyoros (Dyoros) convexus</i> Cooper and Grant	C
<i>Dyoros (Tetragonetes) auriculatus</i> Cooper and Grant	VR
<i>Dyoros (Tetragonetes) complanatus</i> Cooper and Grant	VR
<i>Echinauris productelloides</i> Cooper and Grant	C
<i>Eolyttonia progressa</i> Cooper and Grant	R
<i>Grandaurispina rudis</i> Cooper and Grant	C
<i>Heteralosis magnispina</i> Cooper and Grant	VR
<i>Hustedia citeria</i> Cooper and Grant	C
<i>Hustedia tomea</i> Cooper and Grant	VR
<i>Lepidocrania sublamellosa</i> Cooper and Grant	VR
<i>Liosotella wordensis</i> (R.E. King)	C
<i>Meekella skenoides</i> Girty	VR
<i>Megousia definita</i> Cooper and Grant	VR
<i>Metriolepis exserta</i> Cooper and Grant	VR
<i>Paraspiriferina paginata</i> Cooper and Grant	VR
<i>Paucispinifera tumida</i> Cooper and Grant	R
<i>Pseudoleptodus getawayensis</i> Stehli	VR
<i>Reticulariina roscida</i> Cooper and Grant	R
<i>Rhamnaria sulcata</i> Cooper and Grant	R
<i>Thedusia dischides</i> Cooper and Grant	R
<i>Xenosteges quadratus</i> Cooper and Grant	VR
LOCALITY A520 : Skinner Ranch Formation	
<i>Acosarina dorsisulcata</i> Cooper and Grant	R
<i>Acritosia peculiaris</i> Cooper and Grant	VR
<i>Acritosia teguliferoides</i> (R.E. King)	R
<i>Antronaria dissona</i> Cooper and Grant	R
<i>Composita apheles</i> Cooper and Grant	R
<i>Crenispirifer angulatus</i> (R.E. King)	VR
<i>Derbyia crenulata</i> Girty	R
<i>Echinauris</i> sp.?	VR
<i>Elliottella minima</i> (Stehli)	VR
<i>Enteleles</i> sp.	R
<i>Hustedia hessensis</i> R.E. King	R
<i>Kozlowskia</i> sp.	VR
<i>Linoproductus angustus</i> R.E. King	VR
<i>Meekella hessensis</i> R.E. King	C
<i>Micraphelia</i> sp.	VR
<i>Neophricadothyris bullata</i> Cooper and Grant	VR
<i>Oncosarina</i> sp.	VR
<i>Orthotichia newelli</i> Cooper and Grant	VR
<i>Rhipidomella hessensis</i> R.E. King	VR
<i>Scacchinella titan</i> Cooper and Grant	VR
<i>Stenosisma</i> sp.	VR
LOCALITY A524 : Bell Canyon Formation, Pinery Member	
<i>Altiplecus? deliosus</i> Cooper and Grant	VR
<i>Anteridocus swallowianus</i> (Shumard)	VR
<i>Bryorhynchus bisulcatum</i> (Shumard)	VR
<i>Cartorhium</i> sp.	VR
<i>Chonetinetes varians</i> Cooper and Grant	VR
<i>Composita affinis</i> Girty	VR
<i>Composita emarginata</i> Girty	R
<i>Composita pyriformis</i> Cooper and Grant	VR
<i>Crenispirifer jubatus</i> Cooper and Grant	R
<i>Derbyia</i> sp.	VR
<i>Dielasma sulcatum</i> Girty	VR

	Rarity code		Rarity code
LOCALITY A524 - Continued		<i>Hustedia citeria</i> Cooper and Grant .....	VR
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	R	<i>Thedusia dischides</i> Cooper and Grant .....	VR
<i>Elivina? annectans</i> Cooper and Grant .....	VR	LOCALITY A585 : Cherry Canyon Formation, Getaway	
<i>Fascicosta longaeva</i> (Girty) .....	VR	Member	
<i>Heteralosia magnispina</i> Cooper and Grant .....	VR	<i>Allorhynchus formulosum</i> Cooper and Grant .....	C
<i>Hustedia rupinata</i> Cooper and Grant .....	R	<i>Cartorhium retusum</i> Cooper and Grant .....	VR
<i>Micraphelia scitula</i> Cooper and Grant .....	VR	<i>Cenorhynchia nasuta</i> Cooper and Grant .....	VR
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	VR	<i>Composita parasulcata</i> Cooper and Grant .....	VR
<i>Paucispinifera rara</i> Cooper and Grant .....	VR	<i>Composita prospera</i> Cooper and Grant .....	C
<i>Plectelasma guadalupense</i> (Girty) .....	VR	<i>Dielasma compactum</i> Cooper and Grant .....	VR
<i>Pseudodielasma pinyonense</i> Cooper and Grant .....	VR	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	VR
<i>Rallacosta imporcata</i> Cooper and Grant .....	VR	<i>Heterelasma concavum</i> Cooper and Grant .....	VR
<i>Reticulariina welleri</i> (Girty) .....	VR	<i>Hustedia citeria</i> Cooper and Grant .....	C
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Meekella skenoides</i> Girty .....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Tautosia shumardiana</i> (Girty) .....	VR	<i>Paraspiriferina paginata</i> Cooper and Grant .....	VR
<i>Thedusia emarginata</i> Cooper and Grant .....	VR	<i>Reticulariina girtyi</i> Cooper and Grant .....	R
<i>Thedusia ventricosa</i> Cooper and Grant .....	VR	<i>Spiriferella</i> sp. ....	VR
LOCALITY A528 : Bell Canyon Formation, Pinery		<i>Stenosisma camurum</i> Cooper and Grant .....	C
Member		<i>Stenosisma</i> sp. ....	R
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	LOCALITY A591 : Bone Spring Formation	
<i>Composita affinis</i> Girty .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Crenispirifer jubatus</i> Cooper and Grant .....	R	<i>Antronaria pluricosta</i> Cooper and Grant .....	R
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	VR	<i>Antronaria specialis</i> Cooper and Grant .....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	R	<i>Antronaria spectabilis</i> Cooper and Grant .....	R
<i>Hustedia opsia</i> Cooper and Grant .....	VR	<i>Cartorhium latum</i> (R.E. King) .....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	R	<i>Choanodus perfectus</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	<i>Chondronia bella</i> Cooper and Grant .....	R
<i>Reticulariina</i> sp. ....	R	<i>Chonosteges variabilis</i> Cooper and Grant .....	R
<i>Reticulariina welleri</i> (Girty) .....	VR	<i>Composita cracens</i> Cooper and Grant .....	C
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Cruirithyris longirostris</i> Cooper and Grant .....	R
<i>Scapharina rugosa</i> Cooper and Grant .....	R	<i>Derbyia</i> sp. ....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	R	<i>Dielasma</i> sp. ....	VR
<i>Tropidelasma gregarium</i> (Girty) .....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	VR
LOCALITY A537 : Bell Canyon Formation, Pinery		<i>Enteleles</i> sp. ....	R
Member		<i>Eolyttonia circularis</i> Cooper and Grant .....	VR
<i>Bryorhynchus bisulcatum</i> (Shumard) .....	VR	<i>Eolyttonia pocillata</i> Cooper and Grant .....	VR
<i>Composita emarginata</i> Girty .....	R	<i>Glyptosteges insculptus</i> Cooper and Grant .....	C
<i>Composita pyriformis</i> Cooper and Grant .....	VR	<i>Hercosia uddeni</i> (Böse) .....	C
<i>Craspedona newelli</i> Cooper and Grant .....	VR	<i>Hustedia decollatensis</i> Cooper and Grant .....	C
<i>Crenispirifer jubatus</i> Cooper and Grant .....	VR	<i>Iotina minuta</i> Cooper and Grant .....	R
<i>Derbyia</i> sp. ....	R	<i>Lirellaria diabloensis</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	VR	<i>Meekella hessensis</i> R.E. King .....	C
<i>Dielasma sulcatum</i> Girty .....	VR	<i>Meekella</i> sp. ....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	R	<i>Metriolepis diabloensis</i> Cooper and Grant .....	R
<i>Hustedia</i> sp. ....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	R
<i>Meekella skenoides</i> Girty .....	VR	<i>Neophricadothyris</i> sp. ....	C
<i>Metriolepis</i> sp. ....	VR	<i>Neospirifer neali</i> Cooper and Grant .....	VR
<i>Micraphelia scitula</i> Cooper and Grant .....	R	<i>Nudauris</i> sp. ....	VR
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	VR	<i>Phrenophoria repugnans</i> Cooper and Grant .....	R
<i>Reticulariina</i> sp. ....	VR	<i>Pseudoleptodus?</i> sp. 2 .....	VR
<i>Rhamnaria shumardi</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR	<i>Rhipidomella hessensis</i> R.E. King .....	VR
<i>Spiriferella sulcifer</i> (Shumard) .....	VR	<i>Sceletonia crassa</i> Cooper and Grant .....	VR
<i>Spiriferellina nuda</i> Cooper and Grant .....	VR	<i>Spinifrons quadrata</i> Stehli .....	VR
<i>Thamnosia capitanensis</i> (Girty) .....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	C
<i>Thedusia trigonalis</i> (Girty) .....	VR	<i>Stenosisma levicostum</i> Cooper and Grant .....	C
<i>Tropidelasma gregarium</i> (Girty) .....	VR	<i>Thedusia</i> sp. ....	VR
LOCALITY A547 : Cherry Canyon Formation, Getaway		<i>Tschernyschewia americana</i> Cooper and Grant .....	VR
Member		<i>Wellerella? nitidula</i> Cooper and Grant .....	C
<i>Allorhynchus permianum permianum</i> Stehli .....	VR	LOCALITY A592 : Bone Spring Formation	
<i>Composita</i> sp. ....	VR	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	VR
		<i>Wellerella? nitidula</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY A600 : Cherry Canyon Formation, Getaway Member			
<i>Allorhynchus permianum permianum</i> Stehli .....	R	<i>Acritosia teguliferoides</i> (R.E. King) .....	R
<i>Bothrionia pulchra</i> Cooper and Grant .....	VR	<i>Altiplecus cooperi</i> Stehli .....	VR
<i>Cancrinella</i> sp. ....	VR	<i>Antiquatonia planumbona</i> Stehli .....	VR
<i>Cartorhium retusum</i> Cooper and Grant .....	R	<i>Antronaria dissona</i> Cooper and Grant .....	VR
<i>Composita parasulcata</i> Cooper and Grant .....	C	<i>Antronaria mesicostalis</i> (Girty) .....	VR
<i>Composita prospera</i> Cooper and Grant .....	R	<i>Cartorhium zoyei</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	R	<i>Chonetinella biplicata</i> (R.E. King) .....	VR
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR	<i>Collemataria americana</i> (Girty) .....	VR
<i>Crurithyris tholiaphor</i> Cooper and Grant .....	R	<i>Collemataria marshalli</i> (Stehli) .....	C
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	C	<i>Composita cracens</i> Cooper and Grant .....	R
<i>Cyclacantharia robusta</i> Cooper and Grant .....	VR	<i>Crenispirifer angulatus</i> (R.E. King) .....	R
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Derbyia crenulata</i> Girty .....	C
<i>Derbyia texta</i> Cooper and Grant .....	C	<i>Derbyia nasuta</i> Girty .....	VR
<i>Dielasma pictile</i> Cooper and Grant .....	R	<i>Dielasma diabloense</i> Stehli .....	R
<i>Dielasma</i> sp. ....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant .....	VR	<i>Elliottella minima</i> (Stehli) .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	R	<i>Enteleles stehlii</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>complanatus</i> Cooper and Grant .....	C	<i>Eolyttonia diabloensis</i> (Stehli) .....	C
<i>Echinauris productelloides</i> Cooper and Grant .....	C	<i>Goniarina permiana</i> (Stehli) .....	VR
<i>Echinosteges tuberculatus</i> (R.E. King) .....	R	<i>Hustedia hessensis</i> R.E. King .....	C
<i>Eolyttonia progressa</i> Cooper and Grant .....	R	<i>Kozłowskaia kingi</i> Stehli .....	R
<i>Eolyttonia</i> sp. ....	VR	<i>Leurosina sinesulca</i> (Stehli) .....	R
<i>Grandaurispina</i> sp. 6 .....	VR	<i>Leurosina vulgarica</i> Cooper and Grant .....	R
<i>Grandaurispina undulata</i> Cooper and Grant .....	VR	<i>Linoproductus angustus</i> R.E. King .....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	VR	<i>Liraria lirata</i> Cooper and Grant .....	VR
<i>Hustedia citeria</i> Cooper and Grant .....	R	<i>Meekella attenuata</i> Girty .....	C
<i>Leiorhynchoidea scelestia</i> Cooper and Grant .....	VR	<i>Meekella intermedia</i> Cooper and Grant .....	VR
<i>Leurosina delicata</i> Cooper and Grant .....	VR	<i>Meekella</i> sp. ....	VR
<i>Liosotella spinumbona</i> Cooper and Grant .....	VR	<i>Nudauris diabloensis</i> Stehli .....	R
<i>Liosotella wordensis</i> (R.E. King) .....	C	<i>Orthotichia irregularis</i> Cooper and Grant .....	R
<i>Meekella skenoides</i> Girty .....	R	<i>Petrocrania diabloensis</i> Cooper and Grant .....	VR
<i>Metriolepis exserta</i> Cooper and Grant .....	VR	<i>Poikilosakos informis</i> Cooper and Grant .....	VR
<i>Neophricadothyris conara</i> Cooper and Grant .....	VR	<i>Pontisia nanas</i> (Stehli) .....	VR
<i>Paranorella aquilonia</i> Cooper and Grant .....	VR	<i>Quadrochonetes girtyi</i> Stehli .....	VR
<i>Paraspiriferina paginata</i> Cooper and Grant .....	R	<i>Ramavectus diabloensis</i> Stehli .....	R
<i>Paucispinifera tumida</i> Cooper and Grant .....	R	<i>Reticulariina newelli</i> (Stehli) .....	VR
<i>Petasmatherus opulus</i> Cooper and Grant .....	R	<i>Reticulariina tetrica</i> Cooper and Grant .....	VR
<i>Phrenophoria pinguiformis</i> Cooper and Grant .....	VR	<i>Rhamnaria eximia</i> Cooper and Grant .....	R
<i>Pseudodielasma magnum</i> Cooper and Grant .....	R	<i>Rhipidomella hessensis</i> R.E. King .....	VR
<i>Pseudodielasma</i> sp. ....	R	<i>Scacchinella americana</i> Stehli .....	VR
<i>Reticulariina girtyi</i> Cooper and Grant .....	R	<i>Spinifrons quadrata</i> Stehli .....	C
<i>Rhamnaria sulcata</i> Cooper and Grant .....	C	<i>Tautosia lenumbona</i> (Stehli) .....	VR
<i>Rhynchopora guadalupensis</i> Cooper and Grant .....	VR	<i>Teguliferina conida</i> (Stehli) .....	R
<i>Spiriferella calcarata</i> Cooper and Grant .....	VR	<i>Thamnosia parvispinosa</i> (Stehli) .....	VR
<i>Spiriferella gloverae</i> Cooper and Grant .....	VR	LOCALITY A626 : Hueco Formation	
<i>Tautosia transenna</i> Cooper and Grant .....	VR	<i>Dasysaria undulata</i> Cooper and Grant .....	VR
<i>Thedusia dischides</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Undulella guadalupensis</i> Cooper and Grant .....	C	<i>Kochiproductus</i> sp. ....	VR
<i>Wellerella girtyi seorsa</i> Cooper and Grant .....	R	<i>Meekella</i> sp. ....	VR
<i>Xenosteges quadratus</i> Cooper and Grant .....	R	LOCALITY A628 : Bone Spring Formation	
LOCALITY A624 : Bone Spring Formation		<i>Acritosia teguliferoides</i> (R.E. King) .....	R
<i>Antronaria specialis</i> Cooper and Grant .....	VR	<i>Altiplecus cooperi</i> Stehli .....	VR
<i>Composita cracens</i> Cooper and Grant .....	VR	<i>Chonetinella victoriana</i> (Girty) .....	VR
<i>Enteleles stehlii</i> Cooper and Grant .....	R	<i>Collemataria americana</i> (Girty) .....	VR
<i>Hustedia</i> sp. ....	VR	<i>Collemataria marshalli</i> (Stehli) .....	VR
<i>Kochiproductus elongatus</i> Cooper and Grant .....	VR	<i>Crenispirifer angulatus</i> (R.E. King) .....	VR
<i>Meekella hessensis</i> R.E. King .....	VR	<i>Cyclacantharia</i> sp. ....	VR
<i>Neophricadothyris catatona</i> Cooper and Grant .....	R	<i>Derbyia crenulata</i> Girty .....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	R	<i>Derbyia nasuta</i> Girty .....	VR
<i>Wellerella? nitidula</i> Cooper and Grant .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	VR
LOCALITY A625 : Bone Spring Formation		<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty) .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>magnus</i> Stehli .....	VR
		<i>Elliottella transversalis</i> (Stehli) .....	R
		<i>Fimbrinia ovata</i> Cooper and Grant .....	VR



	Rarity code		Rarity code
LOCALITY A628 - Continued			
<i>Goniarina permiana</i> (Stehli).....	R	<i>Derbyia</i> sp. ....	R
<i>Heteralosia</i> sp. 4 .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Hustedia glomerosa</i> Cooper and Grant .....	R	<i>Diplanus lamellatus</i> (R.E. King) .....	C
<i>Hustedia hessensis</i> R.E. King.....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty).....	R
<i>Kozlowskia kingi</i> Stehli.....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>magnus</i> Stehli .....	VR
<i>Meekella hessensis</i> R.E. King.....	VR	<i>Elliottella minima</i> (Stehli).....	C
<i>Meekella intermedia</i> Cooper and Grant .....	VR	<i>Enteleles stehlii</i> Cooper and Grant .....	R
<i>Orthotetella wolfcampensis</i> R.E. King.....	VR	<i>Eolyttonia diabloensis</i> (Stehli) .....	R
<i>Orthotichia irregularis</i> Cooper and Grant.....	R	<i>Goniarina permiana</i> (Stehli).....	VR
<i>Poikilosakos informis</i> Cooper and Grant .....	VR	<i>Heteralosia</i> sp. ....	VR
<i>Quadrochonetes girtyi</i> Stehli.....	VR	<i>Hustedia glomerosa</i> Cooper and Grant .....	VR
<i>Reticulariina tetrica</i> Cooper and Grant.....	VR	<i>Hustedia hessensis</i> R.E. King.....	C
<i>Rhipidomella hessensis</i> R.E. King.....	VR	<i>Kozlowskia kingi</i> Stehli.....	C
<i>Scacchinella americana</i> Stehli.....	VR	<i>Leurosina sinesulca</i> (Stehli) .....	R
<i>Spinifrons magna</i> Cooper and Grant.....	R	<i>Leurosina vulgarica</i> Cooper and Grant.....	A
LOCALITY A629 : Bone Spring Formation			
<i>Acritosia teguliferoides</i> (R.E. King).....	VR	<i>Linoproductus angustus</i> R.E. King .....	VR
<i>Antiquatonia planumbona</i> Stehli.....	VR	<i>Meekella attenuata</i> Girty .....	C
<i>Antronaria spectabilis</i> Cooper and Grant .....	VR	<i>Meekella intermedia</i> Cooper and Grant .....	R
<i>Cancrinella sparsispinosa</i> Cooper and Grant.....	VR	<i>Orthotichia irregularis</i> Cooper and Grant .....	C
<i>Chonetinella victoriana</i> (Girty).....	R	<i>Poikilosakos informis</i> Cooper and Grant.....	VR
<i>Collemataria americana</i> (Girty).....	VR	<i>Pontisia nanas</i> (Stehli) .....	VR
<i>Crurithyris sulcata</i> Stehli.....	R	<i>Quadrochonetes praecursor</i> Cooper and Grant.....	C
<i>Cyclacantharia</i> sp. ....	VR	<i>Reticulariina newelli</i> (Stehli).....	VR
<i>Derbyia nasuta</i> Girty .....	VR	<i>Reticulariina tetrica</i> Cooper and Grant.....	R
<i>Dielasma diabloense</i> Stehli.....	VR	<i>Rhamnaria eximia</i> Cooper and Grant.....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty).....	R	<i>Rhipidomella hessensis</i> R.E. King.....	C
<i>Elliottella transversalis</i> (Stehli) .....	R	<i>Spinifrons quadrata</i> Stehli.....	C
<i>Eolyttonia diabloensis</i> (Stehli).....	VR	<i>Teguliferina conida</i> (Stehli) .....	R
<i>Goniarina permiana</i> (Stehli).....	R	LOCALITY A632 : Bone Spring Formation	
<i>Hustedia glomerosa</i> Cooper and Grant .....	VR	<i>Antronaria mesicostalis</i> (Girty) .....	VR
<i>Kozlowskia kingi</i> Stehli.....	R	<i>Collemataria americana</i> (Girty).....	VR
<i>Limbella victorioensis</i> Stehli .....	VR	<i>Composita cracens</i> Cooper and Grant.....	VR
<i>Linoproductus angustus</i> R.E. King .....	VR	<i>Enteleles stehlii</i> Cooper and Grant .....	R
<i>Meekella attenuata</i> Girty .....	R	<i>Hustedia hessensis</i> R.E. King.....	VR
<i>Meekella intermedia</i> Cooper and Grant .....	VR	<i>Leiorhynchoidea</i> sp. ....	VR
<i>Nudauris diabloensis</i> Stehli.....	VR	<i>Meekella attenuata</i> Girty .....	VR
<i>Poikilosakos informis</i> Cooper and Grant .....	VR	<i>Neophricadothyris catatona</i> Cooper and Grant .....	VR
<i>Quadrochonetes girtyi</i> Stehli.....	R	<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Rallacosta</i> sp. 2 .....	VR	<i>Spinifrons quadrata</i> Stehli.....	VR
<i>Rhipidomella hessensis</i> R.E. King.....	VR	<i>Stenoscisma</i> sp. ....	VR
<i>Spinifrons magna</i> Cooper and Grant.....	C	<i>Teguliferina conida</i> (Stehli) .....	VR
<i>Spinifrons quadrata</i> Stehli.....	VR	LOCALITY A633 : Bone Spring Formation	
<i>Stenoscisma kalum</i> Stehli .....	R	<i>Echinauris</i> sp. ....	R
<i>Stenoscisma multicostum</i> Stehli.....	R	LOCALITY A634 : Bone Spring Formation	
<i>Tautosia lenumbona</i> (Stehli) .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Tautosia magnisepta</i> (Stehli).....	VR	<i>Chonosteges limbatus</i> Cooper and Grant .....	VR
<i>Teguliferina conida</i> (Stehli) .....	VR	<i>Composita cracens</i> Cooper and Grant.....	VR
<i>Thamnosia parvispinosa</i> (Stehli).....	VR	<i>Echinauris</i> sp. ....	R
LOCALITY A631 : Bone Spring Formation			
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	C	<i>Enteleles stehlii</i> Cooper and Grant .....	VR
<i>Acritosia teguliferoides</i> (R.E. King) .....	C	<i>Leurosina vulgarica</i> Cooper and Grant.....	R
<i>Altiplecus cooperi</i> Stehli.....	VR	<i>Martinia fucina</i> Cooper and Grant .....	VR
<i>Anomalesia perplexa</i> Cooper and Grant.....	VR	<i>Neophricadothyris catatona</i> Cooper and Grant .....	R
<i>Antiquatonia planumbona</i> Stehli.....	VR	<i>Pontisia nanas</i> (Stehli) .....	VR
<i>Chonetinella biplicata</i> (R.E. King).....	C	LOCALITY A635 : Bell Canyon Formation, Hegler	
<i>Collemataria americana</i> (Girty).....	VR	Member	
<i>Composita cracens</i> Cooper and Grant.....	VR	<i>Acanthocrania minutispinosa</i> Cooper and Grant.....	VR
<i>Crenispirifer angulatus</i> (R.E. King).....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant.....	R
<i>Crurithyris sulcata</i> Stehli .....	VR	<i>Arionthia polypleura</i> (Girty).....	R
<i>Cyclacantharia</i> sp. ....	VR	<i>Cartorhium</i> sp. ....	VR
<i>Derbyia crenulata</i> Girty .....	C	<i>Chonetinetes varians</i> Cooper and Grant.....	C
<i>Derbyia nasuta</i> Girty .....	VR	<i>Composita pyriformis</i> Cooper and Grant.....	VR
		<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR
		<i>Craspedona newelli</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY A635 - Continued		LOCALITY A653 : Hueco Formation	
<i>Crenispirifer jubatus</i> Cooper and Grant .....	R	<i>Composita mexicana</i> (Hall) .....	C
<i>Ctenalosia rotunda</i> Cooper and Grant .....	VR	LOCALITY A655 : Bone Spring Formation	
<i>Derbyia</i> sp. ....	C	<i>Scacchianella americana</i> Stehli .....	VR
<i>Dielasma</i> sp. ....	R	LOCALITY A658 : Bone Spring Formation	
<i>Dielasma sulcatum</i> Girty .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>attenuatus</i> Cooper and Grant .....	VR	<i>Agelesia triangularis</i> (R.E. King) .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>intrepidus</i> Cooper and Grant .....	VR	<i>Choanodus irregularis</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	VR	<i>Dielasma</i> sp. 4 .....	VR
<i>Elivina?</i> <i>annectans</i> Cooper and Grant .....	R	<i>Diplanus lamellatus</i> (R.E. King) .....	C
<i>Glossothyropsis robusta</i> (Girty) .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	R	<i>Enteleles plummeri</i> R.E. King .....	C
<i>Heterelasma venustum</i> Girty .....	VR	<i>Heterelasma</i> sp. ....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Hustedia ampullacea</i> Cooper and Grant .....	R
<i>Hustedia samia</i> Cooper and Grant .....	VR	<i>Hustedia</i> sp. ....	R
<i>Hustedia</i> sp. ....	VR	<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Liosotella opima</i> (Girty) .....	R	<i>Meekella hessensis</i> R.E. King .....	C
<i>Meekella skenoides</i> Girty .....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Metriolepis tegulata</i> Cooper and Grant .....	R
<i>Metriolepis pedicosa</i> Cooper and Grant .....	R	<i>Neophricadothyris</i> sp. ....	R
<i>Metriolepis</i> sp. ....	VR	<i>Rhipidomella hispidula</i> Cooper and Grant .....	C
<i>Micraphelia scitula</i> Cooper and Grant .....	A	LOCALITY A660 : Bone Spring Formation	
<i>Micraphelia subalata</i> Cooper and Grant .....	R	<i>Acritosia teguliferoides</i> (R.E. King) .....	VR
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	C	<i>Chonosteges pulcher</i> Cooper and Grant .....	VR
<i>Paraspiriferina</i> sp. ....	VR	<i>Composita nucella</i> Cooper and Grant .....	R
<i>Paucispinifera latidorsata</i> (Girty) .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	VR
<i>Plectelasma guadalupense</i> (Girty) .....	VR	<i>Hustedia decollatensis</i> Cooper and Grant .....	VR
<i>Pseudodielasma pinyonense</i> Cooper and Grant .....	VR	<i>Meekella hessensis</i> R.E. King .....	R
<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR
<i>Reticulariina echinata</i> Cooper and Grant .....	VR	LOCALITY A661 : Bone Spring Formation	
<i>Reticulariina</i> sp. 2 .....	R	<i>Cartorhium latum</i> (R.E. King) .....	VR
<i>Reticulariina welleri</i> (Girty) .....	VR	<i>Neophricadothyris</i> sp. ....	VR
<i>Rhamnaria shumardi</i> Cooper and Grant .....	VR	LOCALITY A663 : Bone Spring Formation	
<i>Sarganostega transversalis</i> Cooper and Grant .....	R	<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR
<i>Scapharina levis</i> Cooper and Grant .....	VR	LOCALITY A678 : Bone Spring Formation, Cutoff	
<i>Scapharina rugosa</i> Cooper and Grant .....	R	Member	
<i>Sestropoma cribriferum</i> Cooper and Grant .....	R	<i>Allorhynchus</i> sp. ....	VR
<i>Spiriferella sulcifer</i> (Shumard) .....	R	<i>Anemonaria sublaevis</i> (R.E. King) .....	VR
<i>Spiriferellina nuda</i> Cooper and Grant .....	VR	<i>Anteridocus bicostratus</i> Cooper and Grant .....	VR
<i>Thamnosia capitanensis</i> (Girty) .....	VR	<i>Anteridocus eximius</i> Cooper and Grant .....	C
<i>Thedusia trigonalis</i> (Girty) .....	VR	<i>Chonetinella</i> sp. 5 .....	VR
<i>Thedusia ventricosa</i> Cooper and Grant .....	VR	<i>Composita nucella</i> Cooper and Grant .....	VA
<i>Xenosteges umbonatus</i> Cooper and Grant .....	C	<i>Crurithyris</i> sp. ....	VR
LOCALITY A636 : Bell Canyon Formation, Pinery		<i>Cyclacantharia</i> sp. ....	VR
Member		<i>Derbyia</i> sp. ....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	C
<i>Cartorhium</i> sp. ....	R	<i>Glossothyropsis</i> sp. 1 (Girty) .....	VR
<i>Crenispirifer jubatus</i> Cooper and Grant .....	R	<i>Grandaurispina</i> sp. ....	VR
<i>Derbyia</i> sp. ....	VR	<i>Heterelasma</i> sp. ....	VR
<i>Hustedia demissa</i> Cooper and Grant .....	VR	<i>Hustedia decollatensis</i> Cooper and Grant .....	C
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Meekella</i> sp. ....	VR
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	R	<i>Metriolepis</i> sp. ....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Paraspiriferina</i> sp. ....	R
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Paucispinifera</i> sp. ....	VR
<i>Spiriferellina nuda</i> Cooper and Grant .....	R	<i>Phrenophoria corpulenta</i> Cooper and Grant .....	R
<i>Thedusia trigonalis</i> (Girty) .....	VR	<i>Phrenophoria incomitata</i> Cooper and Grant .....	VR
<i>Thedusia ventricosa</i> Cooper and Grant .....	R	<i>Pseudodielasma</i> sp. ....	R
LOCALITY A652 : Cherry Canyon Formation, Getaway		<i>Rhynchopora</i> sp. ....	R
Member		<i>Rhynchopora</i> sp. a .....	VR
<i>Ctenalosia fixata</i> Cooper and Stehli .....	VR	<i>Stenoscisma</i> sp. ....	R
<i>Hustedia citeria</i> Cooper and Grant .....	VR	LOCALITY A696 : Bone Spring Formation	
<i>Meekella skenoides</i> Girty .....	VR	<i>Antronaria indentata</i> Cooper and Grant .....	R
<i>Rhamnaria sulcata</i> Cooper and Grant .....	VR		
<i>Thedusia dischides</i> Cooper and Grant .....	VR		



	Rarity code		Rarity code
LOCALITY A696 - Continued		<i>Diplanus rarus</i> Cooper and Grant.....	R
<i>Chonetinella magna</i> Cooper and Grant.....	C	<i>Dyoros (Dyoros) magnus</i> Stehli .....	VR
<i>Chonosteges variabilis</i> Cooper and Grant.....	VR	<i>Enteleles wolfcampensis</i> R.E. King.....	VR
<i>Crurithyris inflata</i> Stehli.....	R	<i>Kozlowskia</i> sp. ....	VR
<i>Derbyia crenulata</i> Girty.....	VR	<i>Meekella magnifica</i> Cooper and Grant.....	R
<i>Derbyia nasuta</i> Girty.....	VR	<i>Neophricadothyris</i> sp. ....	VR
<i>Dyoros (Dyoros) consanguineus</i> (Girty).....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	C
<i>Elliottella transversalis</i> (Stehli) .....	VR	LOCALITY A725 : Capitan Formation	
<i>Enteleles stehlii</i> Cooper and Grant .....	R	<i>Aneuthelasma amygdalinum</i> Cooper and Grant.....	VR
<i>Eolyttonia diabloensis</i> (Stehli).....	VR	<i>Astegosia subquadrata</i> (Girty) .....	C
<i>Fimbrinia ovata</i> Cooper and Grant.....	VR	<i>Geyerella americana</i> Girty.....	VR
<i>Goniarrina permiana</i> (Stehli).....	C	<i>Martinia rhomboidalis</i> Girty .....	R
<i>Hustedia glomerata</i> Cooper and Grant .....	VR	LOCALITY A774 : Capitan Formation	
<i>Meekella angustiplicata</i> Cooper and Grant .....	C	<i>Aneuthelasma amygdalinum</i> Cooper and Grant.....	R
<i>Neophricadothyris catatona</i> Cooper and Grant .....	VR	<i>Grandaurispina</i> sp. ....	VR
<i>Rhipidomella hessensis</i> R.E. King.....	R	<i>Stenosisma</i> sp. ....	VR
<i>Scacchinella americana</i> Stehli.....	VR	<i>Thamnosia capitanensis</i> (Girty).....	VR
<i>Spinifrons magna</i> Cooper and Grant.....	VR	LOCALITY A799 : Capitan Formation	
<i>Teguliferina conida</i> (Stehli) .....	R	<i>Strigirhynchia indentata</i> (Shumard).....	VR
LOCALITY A697 : Bone Spring Formation		LOCALITY A801 : Capitan Formation	
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Anteridocus swallovianus</i> (Shumard).....	VR
<i>Antiquatonia planumbona</i> Stehli.....	VR	<i>Dielasma prolongatum</i> Girty.....	VR
<i>Antronaria mesicostalis</i> (Girty) .....	VR	LOCALITY A803 : Capitan Formation	
<i>Composita cracens</i> Cooper and Grant.....	R	<i>Composita emarginata</i> Girty .....	VR
<i>Crenispirifer angulatus</i> (R.E. King).....	R	LOCALITY A804 : Capitan Formation	
<i>Crurithyris inflata</i> Stehli.....	VR	<i>Anteridocus swallovianus</i> (Shumard).....	VR
<i>Dasysaria undulata?</i> Cooper and Grant .....	VR	<i>Hustedia opsia</i> Cooper and Grant.....	VR
<i>Derbyia</i> sp. ....	VR	<i>Paraspiriferina billingsi</i> (Shumard).....	VR
<i>Enteleles stehlii</i> Cooper and Grant .....	R	<i>Stenosisma</i> sp. ....	VR
<i>Hustedia hessensis</i> R.E. King.....	R	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Kozlowskia</i> sp. ....	R	LOCALITY A806 : Capitan Formation	
<i>Meekella angustiplicata</i> Cooper and Grant .....	VR	<i>Composita emarginata</i> Girty .....	VR
<i>Meekella hessensis</i> R.E. King.....	VR	<i>Strigirhynchia indentata</i> (Shumard).....	VR
<i>Meekella intermedia</i> Cooper and Grant .....	VR	LOCALITY A817 : Capitan Formation	
<i>Rhipidomella hessensis</i> R.E. King.....	R	<i>Astegosia subquadrata</i> (Girty) .....	VR
LOCALITY A699 : Bone Spring Formation		<i>Composita affinis</i> Girty.....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Martinia rhomboidalis</i> Girty .....	VR
<i>Antronaria mesicostalis</i> (Girty) .....	VR	LOCALITY A820 : Capitan Formation	
<i>Derbyia crenulata</i> Girty.....	VR	<i>Derbyia</i> sp. ....	VR
<i>Derbyia nasuta</i> Girty .....	VR	<i>Martinia rhomboidalis</i> Girty .....	VR
<i>Meekella attenuata</i> Girty .....	VR	LOCALITY A830 : Capitan Formation	
<i>Scacchinella americana</i> Stehli.....	VR	<i>Astegosia subquadrata</i> (Girty) .....	VR
LOCALITY A700 : Hueco Formation		<i>Eliva inflata</i> Cooper and Grant.....	VR
<i>Acritosia silicica</i> Cooper and Grant.....	R	<i>Paraspiriferina billingsi</i> (Shumard).....	VR
<i>Beecheria</i> sp. ....	VR	LOCALITY A837 : Capitan Formation	
<i>Composita mexicana</i> (Hall) .....	R	<i>Dielasma prolongatum</i> Girty.....	VR
<i>Composita strongyle</i> Cooper and Grant .....	VR	<i>Liosotella popei</i> (Shumard) .....	VR
<i>Crurithyris</i> sp. ....	R	<i>Pleurelasma costatum</i> Cooper and Grant.....	VR
<i>Dielasma</i> sp. ....	VR	LOCALITY A840 : Capitan Formation	
<i>Kozlowskia</i> sp. ....	VR	<i>Anteridocus swallovianus</i> (Shumard).....	VR
<i>Lowenstamia</i> sp. ....	VR	<i>Astegosia subquadrata</i> (Girty) .....	VR
<i>Meekella circularis</i> Cooper and Grant.....	R	<i>Martinia rhomboidalis</i> Girty .....	VR
<i>Orthotichia kozlowskii</i> R.E. King.....	C	LOCALITY A843 : Capitan Formation	
<i>Scacchinella exasperata</i> Cooper and Grant .....	VR	<i>Astegosia subquadrata</i> (Girty) .....	VR
LOCALITY A703 : Cibolo Formation, Breccia Zone		LOCALITY A847 : Capitan Formation	
<i>Acosarina mesoplatys</i> (R.E. King) .....	C	<i>Anteridocus swallovianus</i> (Shumard).....	R
<i>Acritosia silicica</i> Cooper and Grant.....	R	<i>Dyoros (Dyoros) hillanus</i> (Girty).....	VR
<i>Chonetinella ciboloensis</i> Cooper and Grant.....	R		
<i>Collemataria americana</i> (Girty).....	VR		
<i>Composita crassa</i> Cooper and Grant.....	VR		
<i>Crenispirifer</i> sp. ....	VR		
<i>Derbyia nasuta</i> Girty .....	VR		
<i>Derbyia</i> sp. ....	VR		

	Rarity code		Rarity code
LOCALITY A847 - Continued		<i>Kochiprproductus quadratus</i> Cooper and Grant .....	VR
<i>Eliva inflata</i> Cooper and Grant .....	VR	<i>Nudauris transversa</i> Cooper and Grant .....	R
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Pontisia</i> sp. ....	C
<i>Liosotella popei</i> (Shumard) .....	VR	<i>Reticulariina powwowensis</i> Cooper and Grant .....	VR
<i>Martinia rhomboidalis</i> Girty .....	VR	<i>Waagenoconcha sulcata</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	LOCALITY N510 : Graham Formation	
<i>Plectelasma guadalupense</i> (Girty) .....	VR	<i>Nudauris presplendens</i> Cooper and Grant .....	R
<i>Stenosisma trabeatum</i> Cooper and Grant .....	VR	LOCALITY N510a : Graham Formation	
<i>Strigirhynchia indentata</i> (Shumard) .....	VR	<i>Sulcataria rostrata</i> (Dunbar and Condra) .....	A
<i>Tautosia shumardiana</i> (Girty) .....	VR	LOCALITY N510g : Graham Formation	
<i>Thamnusia capitanensis</i> (Girty) .....	VR	<i>Martinia renfroae</i> Cooper and Grant .....	VR
LOCALITY A853 : Capitan Formation		LOCALITY N511r : Graham Formation	
<i>Composita affinis</i> Girty .....	VR	<i>Waagenoconcha prophetica</i> Cooper and Grant .....	VR
<i>Strigirhynchia indentata</i> (Shumard) .....	VR	LOCALITY N512h : Graham Formation	
LOCALITY M23 : Cathedral Mountain Formation		<i>Nudauris presplendens</i> Cooper and Grant .....	R
<i>Chonosteges pulcher</i> Cooper and Grant .....	VR	LOCALITY N513c : Graham Formation	
<i>Compressoprproductus thomasi</i> Cooper and Grant .....	VR	<i>Nudauris presplendens</i> Cooper and Grant .....	VR
<i>Hustedia spicata</i> Cooper and Grant .....	VR	LOCALITY N518v : Gunsight Formation	
<i>Rhipidomella hispidula</i> Cooper and Grant .....	R	<i>Sulcataria rostrata</i> (Dunbar and Condra) .....	C
LOCALITY M30 : Bell Canyon Formation, Pinery		LOCALITY N519 : Shale Below Cass Formation	
Member		<i>Derbyoides nebrascensis</i> Dunbar and Condra .....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	VR	<i>Diplanus redactus</i> Cooper and Grant .....	VR
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Meekella</i> sp. ....	R
<i>Thedusia trigonalis</i> (Girty) .....	VR	<i>Rhynchopora dossena</i> Cooper and Grant .....	R
LOCALITY M31 : Cherry Canyon Formation, Getaway		<i>Teguliferina armata</i> Cooper and Grant .....	C
Member		LOCALITY N700a : Gaptank Formation	
<i>Bryorhynchus bisulcatum</i> (Shumard) .....	R	<i>Diplanus redactus</i> Cooper and Grant .....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR	<i>Kozlowskia</i> sp. ....	VR
<i>Derbyia texta</i> Cooper and Grant .....	VR	<i>Meekella prionota</i> Cooper and Grant .....	VR
<i>Dielasma picile</i> Cooper and Grant .....	VR	<i>Parenteletes cooperi</i> R.E. King .....	C
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	R	<i>Rhynchopora dossena</i> Cooper and Grant .....	R
<i>Dyoros (Tetragonetes) complanatus</i> Cooper and Grant .....	R	<i>Teguliferina armata</i> Cooper and Grant .....	R
<i>Echinauris productelloides</i> Cooper and Grant .....	VR	LOCALITY N700b : Gaptank Formation	
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR	<i>Parenteletes cooperi</i> R.E. King .....	VR
<i>Eolyttonia progressa</i> Cooper and Grant .....	VR	LOCALITY N700e : Gaptank Formation	
<i>Grandaurispina</i> sp. ....	VR	<i>Hystriulina</i> sp. ....	VR
<i>Hustedia citeria</i> Cooper and Grant .....	R	<i>Juresania</i> sp. 1 .....	VR
<i>Liosotella wordensis</i> (R.E. King) .....	R	<i>Linoprproductus</i> sp. ....	VR
<i>Meekella skenoides</i> Girty .....	VR	LOCALITY N700f : Gaptank Formation	
<i>Megousia definita</i> Cooper and Grant .....	VR	<i>Antiquatonia inflativentra</i> Cooper and Grant .....	VR
<i>Metriolepis exserta</i> Cooper and Grant .....	VR	<i>Chonetinella</i> sp. ....	VR
<i>Paraspiriferina paginata</i> Cooper and Grant .....	VR	<i>Enteletes wolfcampensis</i> R.E. King .....	VR
<i>Paucispinifera</i> sp. ....	VR	<i>Eridmatius marathonsensis</i> Cooper and Grant .....	VR
<i>Reticulariina girtyi</i> Cooper and Grant .....	R	<i>Hustedia</i> sp. ....	VR
<i>Rhamnaria sulcata</i> Cooper and Grant .....	VR	<i>Juresania</i> sp. 1 .....	VR
<i>Spiriferella</i> sp. ....	VR	<i>Kutorginella</i> sp. ....	VR
<i>Thedusia dischides</i> Cooper and Grant .....	VR	<i>Linoprproductus</i> sp. ....	VR
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR	<i>Teguliferina armata</i> Cooper and Grant .....	R
LOCALITY M9804 : Putnam Formation		LOCALITY N700g : Gaptank Formation	
<i>Lowenstamia texana</i> Stehli .....	R	<i>Antiquatonia</i> sp. ....	VR
LOCALITY M9818 : Putnam Formation		<i>Beecheria</i> sp. ....	VR
<i>Lowenstamia texana</i> Stehli .....	R	<i>Derbyia</i> sp. ....	VR
LOCALITY M9880 : Pueblo Formation		<i>Echinaria cf. moorei</i> (Dunbar and Condra) .....	VR
<i>Nudauris reticulata</i> Cooper and Grant .....	C	<i>Eridmatius marathonsensis</i> Cooper and Grant .....	VR
LOCALITY N45 : Graham Formation		<i>Kochiprproductus primitivus</i> Cooper and Grant .....	VR
<i>Waagenoconcha prophetica</i> Cooper and Grant .....	VR	<i>Kozlowskia</i> sp. ....	R
<i>Cleiothyridina</i> sp. ....	R	<i>Limbella costellata</i> Cooper and Grant .....	R
<i>Dasyaria wolfcampensis</i> (R.E. King) .....	R	<i>Linoprproductus</i> sp. ....	VR
<i>Echinauris cf. boulei</i> (Kozlowski) .....	VR	<i>Meekella prionota</i> Cooper and Grant .....	VR
<i>Enteletes costellatus</i> Cooper and Grant .....	R		
<i>Hustedia huecoensis</i> R.E. King .....	C		

	Rarity code		Rarity code
LOCALITY N700g - Continued		LOCALITY N700v : Road Canyon Formation	
<i>Meekella texana</i> R.E. King .....	VR	<i>Collumatus solitarius</i> Cooper and Grant .....	R
<i>Neophricadothyris</i> sp. ....	VR	<i>Composita enormis</i> Cooper and Grant .....	VR
<i>Reticulatia</i> sp. ....	VR	<i>Composita</i> sp. ....	R
<i>Scacchinella primitiva</i> Cooper and Grant .....	C	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	C	<i>Derbyia laqueata</i> Cooper and Grant .....	VR
LOCALITY N700i : Gaptank Formation, Uddenites Member		<i>Echinauris</i> sp. ....	VR
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Enteleles</i> sp. ....	R
LOCALITY N700-l : Cathedral Mountain Formation, Wedin Member		<i>Eolyttonia</i> sp. ....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	C	<i>Hustedia connorsii</i> Cooper and Grant .....	C
<i>Agelesia triangularis</i> (R.E. King) .....	A	<i>Liosotella wordensis</i> (R.E. King) .....	VR
<i>Cartorhium coristum</i> Cooper and Grant .....	VR	<i>Meekella calathica</i> Cooper and Grant .....	R
<i>Choanodus perfectus</i> Cooper and Grant .....	VR	<i>Megousia mucronata</i> Cooper and Grant .....	R
<i>Chonosteges pulcher</i> Cooper and Grant .....	R	<i>Neophricadothyris</i> sp. ....	VR
<i>Collemataria irregularis</i> Cooper and Grant .....	R	<i>Paraspiriferina</i> sp. ....	R
<i>Compressoproductus thomasi</i> Cooper and Grant .....	VR	<i>Paucispiniifera sulcata</i> Cooper and Grant .....	R
<i>Crurithyris</i> sp. ....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR
<i>Derbyia complicata</i> Cooper and Grant .....	R	<i>Spiriferellina</i> sp. ....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	C	<i>Stenoscisma</i> sp. ....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	R	<i>Tropidelasma corniculum</i> Cooper and Grant .....	VR
<i>Enteleles plummeri</i> R.E. King .....	C	LOCALITY N700x : Cathedral Mountain Formation, Wedin Member	
<i>Eolyttonia</i> sp. ....	VR	<i>Agelesia triangularis</i> (R.E. King) .....	A
<i>Hercosia uddeni</i> (Böse) .....	R	<i>Cartorhium coristum</i> Cooper and Grant .....	VR
<i>Hustedia lusca</i> Cooper and Grant .....	VR	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR
<i>Institella leonardensis</i> (R.E. King) .....	R	<i>Choanodus perfectus</i> Cooper and Grant .....	R
<i>Kochiproductus</i> sp. ....	VR	<i>Chonosteges pulcher</i> Cooper and Grant .....	C
<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR	<i>Compressoproductus thomasi</i> Cooper and Grant .....	R
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Cooperina parva</i> Cooper and Grant .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR	<i>Derbyia complicata</i> Cooper and Grant .....	VR
<i>Nudauris linospina</i> Cooper and Grant .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	R
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	R	<i>Enteleles leonardensis</i> R.E. King .....	R
<i>Rugatia paraindica</i> (McKee) .....	VR	<i>Enteleles plummeri</i> R.E. King .....	C
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	VR	<i>Hercosia uddeni</i> (Böse) .....	R
<i>Torynechus caelatus</i> Cooper and Grant .....	VR	<i>Hustedia spicata</i> Cooper and Grant .....	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR	<i>Institella leonardensis</i> (R.E. King) .....	C
LOCALITY N700o : Skinner Ranch Formation, Dugout Mtn Member		<i>Meekella calathica</i> Cooper and Grant .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Metriolepis larina</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR
<i>Peniculauris</i> sp. 1 .....	VR	<i>Stenoscisma triquetrum</i> Cooper and Grant .....	VR
<i>Rhamnaria grandis</i> Cooper and Grant .....	VR	<i>Texarina wordensis</i> (R.E. King) .....	VR
LOCALITY N700p : Skinner Ranch Formation, Dugout Mtn Member		<i>Torynechus caelatus</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR
<i>Torynechus alectorius</i> Cooper and Grant .....	VR	LOCALITY N700y : Skinner Ranch Formation, Sullivan Peak Member	
LOCALITY N700r : Skinner Ranch Formation, Dugout Mtn Member		<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	LOCALITY N701 : Neal Ranch Formation	
<i>Nudauris</i> sp. ....	VR	<i>Acanthocrania</i> sp. ....	VR
<i>Peniculauris</i> sp. 1 .....	VR	<i>Acosarina rectimarginata</i> Cooper and Grant .....	C
LOCALITY N700s : Skinner Ranch Formation, Dugout Mtn Member		<i>Altiplecus argutus</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	VR	<i>Antiquatonia inflativentra</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	<i>Atelestegastus marginatus</i> Cooper and Grant .....	R
LOCALITY N700t : Skinner Ranch Formation, Dugout Mtn Member		<i>Beecheria elliptica</i> Cooper and Grant .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Camarelasma neali</i> Cooper and Grant .....	VR
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Cancrinella parva</i> Cooper and Grant .....	R
		<i>Cenorhynchia hebetata</i> Cooper and Grant .....	VR
		<i>Chelononia neali</i> Cooper and Grant .....	R
		<i>Chondronia rectimarginata</i> Cooper and Grant .....	R
		<i>Chonetinella costellata</i> Cooper and Grant .....	C
		<i>Chonetinella crassiparva</i> Cooper and Grant .....	C
		<i>Chonetinella</i> sp. 2 .....	VR
		<i>Chonetinella</i> sp. ....	VR

## LOCALITY N701 - Continued

	Rarity code
<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	VR
<i>Composita strongyle</i> Cooper and Grant .....	C
<i>Cooperina triangulata</i> Cooper and Grant .....	VR
<i>Crurithyris tumibilis</i> Cooper and Grant .....	C
<i>Ctenalosia primitiva</i> Cooper and Grant .....	VR
<i>Derbyia bella</i> Cooper and Grant .....	C
<i>Derbyia carteri</i> Cooper and Grant .....	R
<i>Derbyia profunda</i> Cooper and Grant .....	R
<i>Derbyia scitula</i> Cooper and Grant .....	A
<i>Derbyia</i> sp. ....	C
<i>Derbyoides dunbari</i> Cooper and Grant .....	VR
<i>Derbyoides marathonensis</i> Cooper and Grant .....	R
<i>Diplanus catatonus</i> Cooper and Grant .....	C
<i>Diplanus redactus</i> Cooper and Grant .....	VR
<i>Echinaria</i> sp. 1 .....	VR
<i>Echinauris interrupta</i> Cooper and Grant .....	VR
<i>Echinosteges?</i> sp. ....	VR
<i>Enteleles wolfcampensis</i> R.E. King .....	A
<i>Eolyttonia fredericksi</i> (R.E. King) .....	VR
<i>Eolyttonia phialiforma</i> Cooper and Grant .....	VR
<i>Eridmatus</i> sp. ....	VR
<i>Fimbrinia plummeri</i> (R.H. King) .....	VR
<i>Geyerella kingorum</i> Cooper and Grant .....	VR
<i>Goniarina</i> sp. ....	VR
<i>Hustedia crepax</i> Cooper and Grant .....	R
<i>Hustedia culcitula</i> Cooper and Grant .....	A
<i>Hypopsia versuta</i> Cooper and Grant .....	R
<i>Hystriculina convexa</i> Cooper and Grant .....	C
<i>Hystriculina minima</i> Cooper and Grant .....	VR
<i>Hystriculina sulcata</i> Cooper and Grant .....	A
<i>Hystriculina ventroplana</i> Cooper and Grant .....	VR
<i>Juresania</i> sp. 1 .....	VR
<i>Juresania</i> sp. 3 .....	VR
<i>Kochiproductus</i> sp. 3 .....	R
<i>Kozlowskia</i> sp. ....	VR
<i>Kutorginella uddeni</i> Cooper and Grant .....	R
<i>Lepidocrania sparsispinosa</i> Cooper and Grant .....	R
<i>Limbella wolfcampensis</i> (R.E. King) .....	C
<i>Linoproductus</i> sp. ....	R
<i>Meekella magnifica</i> Cooper and Grant .....	VR
<i>Meekella prionota</i> Cooper and Grant .....	A
<i>Meekella</i> sp. ....	R
<i>Neochonetes liratus</i> Cooper and Grant .....	C
<i>Neophricadothyris transversa</i> Cooper and Grant .....	VR
<i>Neospirifer apothescelus</i> Cooper and Grant .....	R
<i>Nudauris splendens</i> Cooper and Grant .....	C
<i>Orthotetella wolfcampensis</i> R.E. King .....	R
<i>Orthotichia kozlowskii</i> R.E. King .....	A
<i>Paraspiriferina amoena</i> Cooper and Grant .....	R
<i>Paraspiriferina</i> sp. ....	R
<i>Parenteleles superbus</i> Cooper and Grant .....	VR
<i>Pontisia kingi</i> Cooper and Grant .....	R
<i>Pseudoleptodus conicus</i> Cooper and Grant .....	VR
<i>Pseudoleptodus primitivus</i> Cooper and Grant .....	VR
<i>Reticulariina strigosa</i> Cooper and Grant .....	VR
<i>Reticulatia robusta</i> Cooper and Grant .....	C
<i>Schuchertella? subvexa</i> Cooper and Grant .....	R
<i>Spiriferellina nasuta</i> Cooper and Grant .....	R
<i>Spuriosa circularis</i> Cooper and Grant .....	VR
<i>Spyridiophora distincta</i> Cooper and Stehli .....	VR
<i>Striatifera linoproductiformis</i> Cooper and Grant .....	VR
<i>Sulcataria? compacta</i> Cooper and Grant .....	R
<i>Sulcataria latisulcata</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	A

<i>Tropidelasma culmenatum</i> Cooper and Grant .....	R
<i>Waagenoconcha prophetica</i> Cooper and Grant .....	VR

## LOCALITY N701a : Neal Ranch Formation

<i>Camarelasma neali</i> Cooper and Grant .....	VR
<i>Chondronia rectimarginata</i> Cooper and Grant .....	VR
<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	R
<i>Composita strongyle</i> Cooper and Grant .....	VR
<i>Crurithyris tumibilis</i> Cooper and Grant .....	VR
<i>Derbyia carteri</i> Cooper and Grant .....	VA
<i>Derbyia profunda</i> Cooper and Grant .....	VR
<i>Diplanus catatonus</i> Cooper and Grant .....	R
<i>Enteleles wolfcampensis</i> R.E. King .....	VR
<i>Eolyttonia fredericksi</i> (R.E. King) .....	C
<i>Geyerella kingorum</i> Cooper and Grant .....	C
<i>Hustedia trita leptyca</i> Cooper and Grant .....	VR
<i>Hystriculina minima</i> Cooper and Grant .....	VR
<i>Hystriculina ventroplana</i> Cooper and Grant .....	VR
<i>Kozlowskia nasuta</i> Cooper and Grant .....	VR
<i>Limbella wolfcampensis</i> (R.E. King) .....	R
<i>Linoproductus</i> sp. ....	R
<i>Meekella magnifica</i> Cooper and Grant .....	R
<i>Meekella prionota</i> Cooper and Grant .....	VR
<i>Neophricadothyris transversa</i> Cooper and Grant .....	R
<i>Nothopindax egregius</i> Cooper and Grant .....	VR
<i>Orthotetella wolfcampensis</i> R.E. King .....	VR
<i>Orthotichia kozlowskii</i> R.E. King .....	R
<i>Stenosisma</i> sp. ....	VR
<i>Striatifera linoproductiformis</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	A
<i>Tropidelasma culmenatum</i> Cooper and Grant .....	R

LOCALITY N701a<sup>1</sup> : Neal Ranch Formation

<i>Cancrinella parva</i> Cooper and Grant .....	VR
<i>Composita strongyle</i> Cooper and Grant .....	VR
<i>Derbyia carteri</i> Cooper and Grant .....	VR
<i>Derbyia profunda</i> Cooper and Grant .....	VR
<i>Enteleles wolfcampensis</i> R.E. King .....	VR
<i>Hustedia culcitula</i> Cooper and Grant .....	VR
<i>Hystriculina minima</i> Cooper and Grant .....	VR
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR
<i>Meekella magnifica</i> Cooper and Grant .....	R
<i>Nudauris tribulosa</i> Cooper and Grant .....	VR
<i>Reticulatia</i> sp. 1 .....	VR

LOCALITY N701a<sup>2</sup> : Neal Ranch Formation

<i>Geyerella</i> sp. 3 .....	VR
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LOCALITY N701a<sup>3</sup> : Neal Ranch Formation

<i>Acanthocrania</i> sp. ....	R
<i>Atelestegastus marginatus</i> Cooper and Grant .....	VR
<i>Cenorhynchia hebata</i> Cooper and Grant .....	VR
<i>Chelononia straminea</i> Cooper and Grant .....	R
<i>Composita strongyle</i> Cooper and Grant .....	R
<i>Cooperina triangulata</i> Cooper and Grant .....	C
<i>Crurithyris tumibilis</i> Cooper and Grant .....	R
<i>Derbyia profunda</i> Cooper and Grant .....	VR
<i>Diplanus catatonus</i> Cooper and Grant .....	R
<i>Enteleles wolfcampensis</i> R.E. King .....	R
<i>Eolyttonia fredericksi</i> (R.E. King) .....	VR
<i>Fimbrinia plummeri</i> (R.H. King) .....	VR
<i>Goniarina pyelodes</i> Cooper and Grant .....	R
<i>Hustedia trita leptyca</i> Cooper and Grant .....	C
<i>Hystriculina minima</i> Cooper and Grant .....	VR
<i>Lepidocrania sparsispinosa</i> Cooper and Grant .....	C

	Rarity code		Rarity code
LOCALITY N701a <sup>1</sup> - Continued		<i>Reticulariina strigosa</i> Cooper and Grant	VR
<i>Limbella wolfcampensis</i> (R.E. King)	R	<i>Reticulatia robusta</i> Cooper and Grant	VR
<i>Linoproductus</i> sp.	VR	<i>Reticulatia</i> sp. 1	VR
<i>Meekella prionota</i> Cooper and Grant	VR	<i>Rhipidomella miscella</i> Cooper and Grant	R
<i>Neochonetes liratus</i> Cooper and Grant	C	<i>Rhynchopora molina</i> Cooper and Grant	VR
<i>Neophricadothyris transversa</i> Cooper and Grant	C	<i>Spiriferellina nasuta</i> Cooper and Grant	VR
<i>Nudauris splendens</i> Cooper and Grant	VR	<i>Striatifera linoproductiformis</i> Cooper and Grant	VR
<i>Orthotichia kozlowskii</i> R.E. King	C	<i>Teguliferina boesei</i> R.E. King	VA
<i>Paraspiriferina amoena</i> Cooper and Grant	C	<i>Teguliferina solidispinosa</i> Cooper and Grant	R
<i>Pontisia kingi</i> Cooper and Grant	C	<i>Tropidlasma culmenatum</i> Cooper and Grant	R
<i>Psilocamara hesperia</i> Cooper and Grant	R		
<i>Rhipidomella miscella</i> Cooper and Grant	VR	LOCALITY N701d : Neal Ranch Formation	
<i>Rhynchopora molina</i> Cooper and Grant	VR	<i>Acosarina rectimarginata</i> Cooper and Grant	SA
<i>Teguliferina boesei</i> R.E. King	VR	<i>Altiplecus argutus</i> Cooper and Grant	C
		<i>Atelestegastus marginatus</i> Cooper and Grant	C
LOCALITY N701b : Neal Ranch Formation		<i>Beecheria elliptica</i> Cooper and Grant	R
<i>Paraspiriferina amoena</i> Cooper and Grant	VR	<i>Calliprotonia</i> sp.	VR
<i>Reticulariina strigosa</i> Cooper and Grant	VR	<i>Cancrinella parva</i> Cooper and Grant	R
<i>Reticulatia huecoensis</i> (R.E. King)	VR	<i>Cenorhynchia hebata</i> Cooper and Grant	C
		<i>Cenorhynchia ventricosa</i> Cooper and Grant	VR
LOCALITY N701c : Neal Ranch Formation		<i>Chelononia straminea</i> Cooper and Grant	VR
<i>Acosarina rectimarginata</i> Cooper and Grant	R	<i>Chondronia rectimarginata</i> Cooper and Grant	R
<i>Acritosia magna</i> Cooper and Grant	VR	<i>Chonetinella</i> sp.	VR
<i>Atelestegastus marginatus</i> Cooper and Grant	VR	<i>Cleiothyridina rectimarginata</i> Cooper and Grant	C
<i>Camarelasma neali</i> Cooper and Grant	C	<i>Composita strongyle</i> Cooper and Grant	C
<i>Cancrinella parva</i> Cooper and Grant	VR	<i>Cooperina triangulata</i> Cooper and Grant	A
<i>Cenorhynchia hebata</i> Cooper and Grant	R	<i>Crurithyris tumibilis</i> Cooper and Grant	A
<i>Chonetinella costellata</i> Cooper and Grant	VR	<i>Ctenalosis primitiva</i> Cooper and Grant	VR
<i>Cleiothyridina rectimarginata</i> Cooper and Grant	R	<i>Derbyia carteri</i> Cooper and Grant	VA
<i>Composita strongyle</i> Cooper and Grant	R	<i>Derbyia profunda</i> Cooper and Grant	C
<i>Crurithyris tumibilis</i> Cooper and Grant	C	<i>Derbyia scitula</i> Cooper and Grant	A
<i>Derbyia carteri</i> Cooper and Grant	R	<i>Derbyia</i> sp.	R
<i>Derbyia profunda</i> Cooper and Grant	VR	<i>Dielasma pygmaeum</i> Cooper and Grant	VR
<i>Derbyia scitula</i> Cooper and Grant	R	<i>Diplanus catatonus</i> Cooper and Grant	VA
<i>Derbyia</i> sp.	C	<i>Echinauris interrupta</i> Cooper and Grant	C
<i>Diplanus catatonus</i> Cooper and Grant	C	<i>Echinauris subquadrata</i> Cooper and Grant	VR
<i>Echinaria</i> sp. 1	VR	<i>Enteleter wolfcampensis</i> R.E. King	C
<i>Echinauris interrupta</i> Cooper and Grant	VR	<i>Eolyttonia fredericksi</i> (R.E. King)	R
<i>Echinauris subquadrata</i> Cooper and Grant	VR	<i>Eridmatus</i> sp.	R
<i>Enteleter wolfcampensis</i> R.E. King	C	<i>Fimbrinia plummeri</i> (R.H. King)	VR
<i>Eolyttonia catilla</i> Cooper and Grant	VR	<i>Geyerella kingorum</i> Cooper and Grant	VR
<i>Eolyttonia fredericksi</i> (R.E. King)	C	<i>Goniarina</i> sp.	VR
<i>Geyerella kingorum</i> Cooper and Grant	C	<i>Hemileurus runcinatus</i> Cooper and Grant	R
<i>Hemileurus runcinatus</i> Cooper and Grant	R	<i>Hustedia crepax</i> Cooper and Grant	VR
<i>Hustedia crepax</i> Cooper and Grant	VR	<i>Hustedia trita leptyca</i> Cooper and Grant	VA
<i>Hustedia</i> sp.	VR	<i>Hystriculina convexa</i> Cooper and Grant	C
<i>Hustedia trita leptyca</i> Cooper and Grant	C	<i>Hystriculina minima</i> Cooper and Grant	C
<i>Hystriculina minima</i> Cooper and Grant	R	<i>Hystriculina sulcata</i> Cooper and Grant	VR
<i>Hystriculina sulcata</i> Cooper and Grant	R	<i>Juresania</i> sp. 2	R
<i>Kochiproductus</i> sp. 3	VR	<i>Kochiproductus</i> sp. 3	VR
<i>Kutorginella uddeni</i> Cooper and Grant	VR	<i>Lepidocrania sparsispinosa</i> Cooper and Grant	VR
<i>Lepidocrania sparsispinosa</i> Cooper and Grant	VR	<i>Limbella wolfcampensis</i> (R.E. King)	R
<i>Limbella wolfcampensis</i> (R.E. King)	C	<i>Linoproductus semisulcatus</i> Cooper and Grant	VR
<i>Linoproductus semisulcatus</i> Cooper and Grant	VR	<i>Linoproductus</i> sp.	VR
<i>Linoproductus</i> sp.	VR	<i>Meekella prionota</i> Cooper and Grant	A
<i>Meekella magnifica</i> Cooper and Grant	R	<i>Neochonetes liratus</i> Cooper and Grant	VR
<i>Meekella prionota</i> Cooper and Grant	R	<i>Neochonetes parvus</i> Cooper and Grant	R
<i>Neochonetes liratus</i> Cooper and Grant	VR	<i>Neochonetes</i> sp.	VR
<i>Neochonetes parvus</i> Cooper and Grant	R	<i>Neophricadothyris transversa</i> Cooper and Grant	R
<i>Neophricadothyris transversa</i> Cooper and Grant	R	<i>Neospirifer apothescelus</i> Cooper and Grant	R
<i>Neospirifer apothescelus</i> Cooper and Grant	VR	<i>Pontisia kingi</i> Cooper and Grant	C
<i>Nudauris splendens</i> Cooper and Grant	VR	<i>Pseudoleptodus conicus</i> Cooper and Grant	C
<i>Orthotetella wolfcampensis</i> R.E. King	VR	<i>Reticulariina strigosa</i> Cooper and Grant	VR
<i>Orthotichia kozlowskii</i> R.E. King	C	<i>Reticulatia robusta</i> Cooper and Grant	R
<i>Parenteleter superbus</i> Cooper and Grant	R	<i>Rhipidomella miscella</i> Cooper and Grant	C
<i>Pontisia kingi</i> Cooper and Grant	R	<i>Rhynchopora molina</i> Cooper and Grant	C
<i>Pseudoleptodus conicus</i> Cooper and Grant	VR		



	Rarity code		Rarity code
LOCALITY N701d - Continued			
<i>Spyridiophora distincta</i> Cooper and Stehli .....	VR	<i>Lowenstamia</i> sp. 1 .....	VR
<i>Stenosisma</i> sp. ....	VR	<i>Meekella magnifica</i> Cooper and Grant.....	VA
<i>Striatifera linoproductiformis</i> Cooper and Grant.....	A	<i>Orthotichia kozlowskii</i> R.E. King.....	SA
<i>Sulcataria latisulcata</i> Cooper and Grant .....	VR	<i>Pontisia kingi</i> Cooper and Grant.....	VR
<i>Teguliferina boesei</i> R.E. King .....	VA	<i>Tropidelasma culmenatum</i> Cooper and Grant.....	VR
<i>Tropidelasma culmenatum</i> Cooper and Grant.....	VR	LOCALITY N701h : Neal Ranch Formation	
LOCALITY N701e : Gaptank Formation, Uddenites		<i>Acosarina rectimarginata</i> Cooper and Grant.....	R
Member		<i>Acritosia magna</i> Cooper and Grant.....	C
<i>Antiquatonia inflativentra</i> Cooper and Grant.....	R	<i>Atelestegastus marginatus</i> Cooper and Grant.....	A
<i>Cancrinella</i> sp. ....	VR	<i>Camarelasma neali</i> Cooper and Grant.....	VA
<i>Chonetinella costellata</i> Cooper and Grant.....	R	<i>Chelononia straminea</i> Cooper and Grant.....	VR
<i>Chonetinella parva</i> Cooper and Grant.....	VR	<i>Chondronia rectimarginata</i> Cooper and Grant.....	A
<i>Composita strongyle</i> Cooper and Grant .....	VR	<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	A
<i>Crurithyris tumibilis</i> Cooper and Grant .....	VR	<i>Composita strongyle</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Crurithyris tumibilis</i> Cooper and Grant .....	C
<i>Diplanus redactus</i> Cooper and Grant .....	VR	<i>Derbyia carteri</i> Cooper and Grant .....	R
<i>Enteleles wolfcampensis</i> R.E. King.....	VR	<i>Derbyia profunda</i> Cooper and Grant.....	C
<i>Eridmatius marathonsensis</i> Cooper and Grant .....	VR	<i>Diplanus catatonus</i> Cooper and Grant.....	C
<i>Gypospirifer anancites</i> Cooper and Grant .....	R	<i>Eolyttonia fredericksi</i> (R.E. King) .....	C
<i>Hystriculina sulcata</i> Cooper and Grant.....	C	<i>Geyerella kingorum</i> Cooper and Grant.....	VA
<i>Hystriculina ventroplana</i> Cooper and Grant .....	R	<i>Hemileurus runcinatus</i> Cooper and Grant .....	C
<i>Juresania</i> sp. 1 .....	VR	<i>Hustedia trita leptyca</i> Cooper and Grant .....	R
<i>Kochiproductus primitivus</i> Cooper and Grant.....	VR	<i>Hystriculina minima</i> Cooper and Grant.....	VR
<i>Kutorginella uddeni</i> Cooper and Grant .....	VR	<i>Limbella wolfcampensis</i> (R.E. King) .....	A
<i>Linoproductus</i> sp. ....	VR	<i>Lowenstamia</i> sp. 1 .....	VR
<i>Meekella texana</i> R.E. King .....	VR	<i>Meekella prionota</i> Cooper and Grant.....	C
<i>Neochonetes liratus</i> Cooper and Grant .....	VR	<i>Neochonetes liratus</i> Cooper and Grant .....	VR
<i>Neochonetes</i> sp. ....	VR	<i>Neophricadothyris transversa</i> Cooper and Grant.....	VR
<i>Neophricadothyris transversa</i> Cooper and Grant.....	VR	<i>Nothopindax egregius</i> Cooper and Grant .....	R
<i>Nudauris splendens</i> Cooper and Grant.....	R	<i>Orthotetella wolfcampensis</i> R.E. King .....	VR
<i>Nudauris tribulosa</i> Cooper and Grant.....	VR	<i>Parenteleles superbus</i> Cooper and Grant.....	A
<i>Orthotichia kozlowskii</i> R.E. King.....	C	<i>Rhipidomella miscella</i> Cooper and Grant.....	R
<i>Pontisia kingi</i> Cooper and Grant.....	VR	<i>Spyridiophora distincta</i> Cooper and Stehli .....	R
<i>Reticulariina</i> sp. ....	VR	<i>Stenosisma</i> sp. ....	VR
<i>Reticulatia</i> sp. 2 .....	VR	<i>Teguliferina boesei</i> R.E. King .....	VA
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Tropidelasma culmenatum</i> Cooper and Grant.....	VA
<i>Teguliferina boesei</i> R.E. King .....	R	LOCALITY N701j : Neal Ranch Formation	
<i>Waagenoconcha prophetica</i> Cooper and Grant.....	VR	<i>Orthotetella wolfcampensis</i> R.E. King .....	VR
LOCALITY N701f : Gaptank Formation, Uddenites		LOCALITY N701k : Neal Ranch Formation	
Member		<i>Acanthocrania</i> sp. ....	VR
<i>Composita</i> sp. ....	VR	<i>Acosarina rectimarginata</i> Cooper and Grant.....	SA
<i>Derbyia carteri</i> Cooper and Grant .....	VR	<i>Acritosia magna</i> Cooper and Grant.....	C
<i>Echinaria</i> cf. <i>moorei</i> (Dunbar and Condra).....	VR	<i>Atelestegastus marginatus</i> Cooper and Grant.....	C
<i>Echinauris subquadrata</i> Cooper and Grant .....	VR	<i>Camarelasma neali</i> Cooper and Grant.....	VA
<i>Hystriculina sulcata</i> Cooper and Grant.....	VR	<i>Cenorhynchia hebata</i> Cooper and Grant .....	R
<i>Juresania</i> sp. 1 .....	VR	<i>Chondronia rectimarginata</i> Cooper and Grant.....	A
<i>Linoproductus</i> sp. ....	VR	<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	A
<i>Meekella texana</i> R.E. King.....	VR	<i>Composita strongyle</i> Cooper and Grant .....	R
<i>Neophricadothyris transversa</i> Cooper and Grant.....	VR	<i>Crurithyris tumibilis</i> Cooper and Grant .....	A
<i>Neospirifer apothescelus</i> Cooper and Grant .....	VR	<i>Derbyia carteri</i> Cooper and Grant .....	VR
<i>Nudauris splendens</i> Cooper and Grant.....	VR	<i>Derbyia profunda</i> Cooper and Grant.....	A
<i>Parenteleles cooperi</i> R.E. King.....	C	<i>Dielasma pygmaeum</i> Cooper and Grant .....	R
<i>Reticulatia</i> sp. 2 .....	VR	<i>Diplanus catatonus</i> Cooper and Grant.....	VA
<i>Scacchinella triangulata</i> Cooper and Grant.....	VR	<i>Enteleles wolfcampensis</i> R.E. King.....	A
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Eolyttonia fredericksi</i> (R.E. King) .....	R
LOCALITY N701g : Neal Ranch Formation		<i>Geyerella kingorum</i> Cooper and Grant .....	VA
<i>Acritosia magna</i> Cooper and Grant.....	C	<i>Goniarrina pyelodes</i> Cooper and Grant .....	A
<i>Chondronia rectimarginata</i> Cooper and Grant.....	R	<i>Hemileurus runcinatus</i> Cooper and Grant .....	VA
<i>Derbyia profunda</i> Cooper and Grant.....	C	<i>Hustedia trita leptyca</i> Cooper and Grant .....	C
<i>Enteleles wolfcampensis</i> R.E. King.....	VR	<i>Hustedia trita trita</i> Cooper and Grant.....	A
<i>Hustedia trita leptyca</i> Cooper and Grant .....	VR	<i>Hystriculina convexa</i> Cooper and Grant .....	VR
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	<i>Hystriculina sulcata</i> Cooper and Grant.....	VR
		<i>Limbella wolfcampensis</i> (R.E. King) .....	A

	Rarity code		Rarity code
LOCALITY N701k - Continued			
<i>Meekella prionota</i> Cooper and Grant .....	C	<i>Hystriculina sulcata</i> Cooper and Grant .....	R
<i>Neochonetes parvus</i> Cooper and Grant .....	R	<i>Hystriculina ventroplana</i> Cooper and Grant .....	VR
<i>Neochonetes</i> sp. ....	VR	<i>Juresania</i> sp. 1 .....	VR
<i>Neophricadothyris transversa</i> Cooper and Grant .....	R	<i>Kutorginella uddeni</i> Cooper and Grant .....	VR
<i>Neospirifer apothescelus</i> Cooper and Grant .....	VR	<i>Leiorhynchoidea</i> sp. ....	VR
<i>Nothopindax egregius</i> Cooper and Grant .....	VR	<i>Linoproductus</i> sp. ....	VR
<i>Orthotetella wolfcampensis</i> R.E. King .....	VR	<i>Lissochonetes parvisulcatus</i> Cooper and Grant .....	R
<i>Paraspiriferina amoena</i> Cooper and Grant .....	VR	<i>Meekella prionota</i> Cooper and Grant .....	VR
<i>Parenteletes superbus</i> Cooper and Grant .....	C	<i>Neochonetes liratus</i> Cooper and Grant .....	VR
<i>Pontisia kingi</i> Cooper and Grant .....	R	<i>Neochonetes</i> sp. ....	VR
<i>Rhipidomella miscella</i> Cooper and Grant .....	C	<i>Neophricadothyris transversa</i> Cooper and Grant .....	VR
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Nudauris splendens</i> Cooper and Grant .....	VR
<i>Spyridiophora distincta</i> Cooper and Stehli .....	R	<i>Nudauris tribulosa</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	VA	<i>Orthotetella wolfcampensis</i> R.E. King .....	VR
<i>Tropidelasma culmenatum</i> Cooper and Grant .....	A	<i>Parenteletes cooperi</i> R.E. King .....	VR
LOCALITY N701l : Neal Ranch Formation		<i>Reticulariina</i> sp. ....	VR
<i>Beecheria expansa</i> Cooper and Grant .....	VR	<i>Reticulatia</i> sp. 2 .....	VR
<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	R	<i>Sulcataria</i> sp. 1 .....	VR
<i>Composita strongyle</i> Cooper and Grant .....	C	<i>Teguliferina boesei</i> R.E. King .....	R
<i>Crurithyris tumibilis</i> Cooper and Grant .....	C	LOCALITY N701q : Gaptank Formation, Uddenites	
<i>Derbyia bella</i> Cooper and Grant .....	VA	Member	
<i>Derbyia strophomenoidea</i> Cooper and Grant .....	C	<i>Antiquatonia inflativentra</i> Cooper and Grant .....	VR
<i>Derbyoides dunbari</i> Cooper and Grant .....	VR	<i>Cancrinella</i> sp. ....	VR
<i>Dielasma pygmaeum</i> Cooper and Grant .....	R	<i>Chonetinella parva</i> Cooper and Grant .....	VR
<i>Diplanus catatonus</i> Cooper and Grant .....	R	<i>Composita strongyle</i> Cooper and Grant .....	VR
<i>Diplanus redactus</i> Cooper and Grant .....	VR	<i>Crurithyris tumibilis</i> Cooper and Grant .....	VR
<i>Enteletes wolfcampensis</i> R.E. King .....	R	<i>Derbyia carteri</i> Cooper and Grant .....	VR
<i>Eolytonia fredericki</i> (R.E. King) .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Geyerella kingorum</i> Cooper and Grant .....	VR	<i>Eridmatius marathonsensis</i> Cooper and Grant .....	VR
<i>Goniarina</i> sp. ....	VR	<i>Eridmatius</i> sp. ....	VR
<i>Hustedia trita leptyca</i> Cooper and Grant .....	C	<i>Hystriculina sulcata</i> Cooper and Grant .....	C
<i>Hystriculina sulcata</i> Cooper and Grant .....	R	<i>Hystriculina ventroplana</i> Cooper and Grant .....	C
<i>Limbella wolfcampensis</i> (R.E. King) .....	R	<i>Juresania</i> sp. 1 .....	VR
<i>Lowenstamia ampla</i> Cooper and Grant .....	R	<i>Kochiproductus</i> sp. ....	VR
<i>Lowenstamia</i> sp. ....	R	<i>Kutorginella uddeni</i> Cooper and Grant .....	R
<i>Meekella prionota</i> Cooper and Grant .....	VA	<i>Linoproductus</i> sp. 1 .....	R
<i>Meekella</i> sp. ....	VR	<i>Meekella texana</i> R.E. King .....	R
<i>Neophricadothyris transversa</i> Cooper and Grant .....	VR	<i>Neochonetes liratus</i> Cooper and Grant .....	VR
<i>Neospirifer placidus</i> Cooper and Grant .....	VR	<i>Neophricadothyris transversa</i> Cooper and Grant .....	VR
<i>Orthotichia kozlowskii</i> R.E. King .....	C	<i>Orthotichia kozlowskii</i> R.E. King .....	R
<i>Paraspiriferina</i> sp. ....	VR	<i>Parenteletes cooperi</i> R.E. King .....	R
<i>Parenteletes cooperi</i> R.E. King .....	R	<i>Pontisia kingi</i> Cooper and Grant .....	VR
<i>Parenteletes superbus</i> Cooper and Grant .....	R	<i>Reticulatia</i> sp. 2 .....	VR
<i>Pontisia kingi</i> Cooper and Grant .....	R	<i>Rhynchopora molina</i> Cooper and Grant .....	R
<i>Pseudoleptodus conicus</i> Cooper and Grant .....	VR	<i>Scacchinella triangulata</i> Cooper and Grant .....	VR
<i>Psilocamara hesperia</i> Cooper and Grant .....	VR	<i>Teguliferina boesei</i> R.E. King .....	VR
<i>Reticulariina strigosa</i> Cooper and Grant .....	VR	<i>Waagenoconcha prophetica</i> Cooper and Grant .....	VR
<i>Reticulatia robusta</i> Cooper and Grant .....	VR	LOCALITY N701r : Gaptank Formation, Uddenites	
<i>Rhipidomella miscella</i> Cooper and Grant .....	VR	Member	
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Antiquatonia inflativentra</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	C	<i>Eridmatius marathonsensis</i> Cooper and Grant .....	VR
LOCALITY N701p : Gaptank Formation, Uddenites		<i>Hystriculina sulcata</i> Cooper and Grant .....	VR
Member		<i>Juresania</i> sp. 1 .....	VR
<i>Acosarina</i> sp. ....	VR	<i>Linoproductus</i> sp. ....	VR
<i>Beecheria</i> sp. ....	VR	LOCALITY N701t : Gaptank Formation, Uddenites	
<i>Chonetinella costellata</i> Cooper and Grant .....	VR	Member	
<i>Composita</i> sp. ....	VR	<i>Beecheria</i> sp. ....	VR
<i>Crurithyris tumibilis</i> Cooper and Grant .....	VR	<i>Eridmatius marathonsensis</i> Cooper and Grant .....	VR
<i>Echinaria</i> cf. <i>moorei</i> (Dunbar and Condra) .....	VR	<i>Hustedia</i> sp. ....	VR
<i>Enteletes wolfcampensis</i> R.E. King .....	VR	<i>Hystriculina sulcata</i> Cooper and Grant .....	VR
<i>Eridmatius marathonsensis</i> Cooper and Grant .....	VR	<i>Kutorginella uddeni</i> Cooper and Grant .....	VR
<i>Gypospirifer anacites</i> Cooper and Grant .....	VR	<i>Linoproductus</i> sp. ....	VR
<i>Hustedia</i> sp. ....	R	<i>Neochonetes liratus</i> Cooper and Grant .....	VR



	Rarity code		Rarity code
LOCALITY N701t - Continued		<i>Teguliferina boesei</i> R.E. King .....	VR
<i>Neochonetes</i> sp. ....	VR	LOCALITY N702 : Cathedral Mountain Formation	
<i>Neospirifer apothescelus</i> Cooper and Grant .....	VR	<i>Acanthocrania densispina</i> Cooper and Grant .....	R
<i>Parenteletes cooperi</i> R.E. King .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	VA
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Amphipella arcaria</i> Cooper and Grant .....	R
LOCALITY N701u : Gaptank Formation, Uddenites		<i>Anemonaria sublaevis</i> (R.E. King) .....	R
Member		<i>Anteridocus erugatus</i> Cooper and Grant .....	VR
<i>Derbyia profunda</i> Cooper and Grant .....	VR	<i>Anteridocus gongylus</i> Cooper and Grant .....	C
<i>Echinaria</i> sp. 2 .....	VR	<i>Antronaria speciosa</i> Cooper and Grant .....	VR
<i>Echinauris subquadrata</i> Cooper and Grant .....	VR	<i>Beecheria</i> sp. ....	VR
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Cartorhium latum</i> (R.E. King) .....	C
LOCALITY N701v : Gaptank Formation, Uddenites		<i>Cenorhynchia mitigata</i> Cooper and Grant .....	C
Member		<i>Cenorhynchia saginata</i> Cooper and Grant .....	VR
<i>Acosarina</i> sp. ....	VR	<i>Chaeniorhynchus inauris</i> Cooper and Grant .....	R
<i>Antiquatonia inflativentra</i> Cooper and Grant .....	VR	<i>Choanodus irregularis</i> Cooper and Grant .....	C
<i>Cancrinella</i> sp. ....	VR	<i>Choanodus perfectus</i> Cooper and Grant .....	R
<i>Chonetinella costellata</i> Cooper and Grant .....	VR	<i>Chondronia bella</i> Cooper and Grant .....	C
<i>Composita</i> sp. ....	VR	<i>Chonosteges costellatus</i> Cooper and Grant .....	VR
<i>Diplanus redactus</i> Cooper and Grant .....	VR	<i>Chonosteges pulcher</i> Cooper and Grant .....	VR
<i>Eridmatus marathonensis</i> Cooper and Grant .....	R	<i>Chonosteges variabilis</i> Cooper and Grant .....	A
<i>Gypospirifer anancites</i> Cooper and Grant .....	VR	<i>Collemataria gregaria</i> Cooper and Grant .....	A
<i>Hystriculina sulcata</i> Cooper and Grant .....	R	<i>Composita bucculenta</i> Cooper and Grant .....	C
<i>Hystriculina ventroplana</i> Cooper and Grant .....	R	<i>Composita imbricata</i> Cooper and Grant .....	A
<i>Kochiproductus primitivus</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	C
<i>Kutorginella uddeni</i> Cooper and Grant .....	R	<i>Compressoproductus thomasi</i> Cooper and Grant .....	VR
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	<i>Cooperina parva</i> Cooper and Grant .....	VR
<i>Linoproductus meniscus</i> Dunbar and Condra .....	VR	<i>Derbyia complicata</i> Cooper and Grant .....	R
<i>Meekella prionota</i> Cooper and Grant .....	VR	<i>Derbyia informis</i> Cooper and Grant .....	C
<i>Neochonetes liratus</i> Cooper and Grant .....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	A
<i>Nudauris splendens</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Parenteletes cooperi</i> R.E. King .....	VR	<i>Dielasma anterolatum</i> Cooper and Grant .....	VR
<i>Pontisia kingi</i> Cooper and Grant .....	VR	<i>Dielasma obesum</i> Cooper and Grant .....	VR
<i>Reticulatia</i> sp. 2 .....	VR	<i>Dielasma perplexum</i> Cooper and Grant .....	R
<i>Rhipidomella</i> sp. ....	VR	<i>Dielasma</i> sp. 7 .....	VR
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	C
<i>Scacchinella triangulata</i> Cooper and Grant .....	VR	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	A
<i>Teguliferina boesei</i> R.E. King .....	R	<i>Dyoros (Tetragonetes) giganteus</i> Cooper and Grant .....	VR
<i>Tropidelasma culmenatum</i> Cooper and Grant .....	VR	<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant .....	R
<i>Waagenoconcha prophetica</i> Cooper and Grant .....	VR	<i>Echinauris crassa</i> Cooper and Grant .....	C
LOCALITY N701x : Gaptank Formation, Uddenites		<i>Echinauris irregularis</i> Cooper and Grant .....	VA
Member		<i>Edriosteges beedei</i> (R.E. King) .....	VR
<i>Composita strongyle</i> Cooper and Grant .....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C
<i>Goniarina</i> sp. 4 .....	VR	<i>Elassonia petila</i> Cooper and Grant .....	R
<i>Juresania</i> sp. 1 .....	VR	<i>Enteletes leonardensis</i> R.E. King .....	C
<i>Kochiproductus primitivus</i> Cooper and Grant .....	VR	<i>Enteletes plummeri</i> R.E. King .....	R
<i>Linoproductus</i> sp. ....	VR	<i>Eolyttonia chaotica</i> Cooper and Grant .....	VR
<i>Meekella magnifica</i> Cooper and Grant .....	VR	<i>Eolyttonia circularis</i> Cooper and Grant .....	C
<i>Neophricadothyris transversa</i> Cooper and Grant .....	VR	<i>Eolyttonia pocillata</i> Cooper and Grant .....	C
<i>Neospirifer apothescelus</i> Cooper and Grant .....	VR	<i>Goniarina futilis</i> Cooper and Grant .....	A
<i>Nudauris splendens</i> Cooper and Grant .....	VR	<i>Grandaurispina? vaga</i> Cooper and Grant .....	R
<i>Orthotetella wolfcampensis</i> R.E. King .....	VR	<i>Hercosestria cribrosa</i> Cooper and Grant .....	VR
<i>Parenteletes cooperi</i> R.E. King .....	VR	<i>Hercosestria</i> sp. ....	VR
<i>Scacchinella triangulata</i> Cooper and Grant .....	VR	<i>Hercosia uddeni</i> (Böse) .....	VA
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Heteralosia</i> sp. 1 .....	VR
LOCALITY N701y : Gaptank Formation		<i>Heterelasma contortum</i> Cooper and Grant .....	VR
<i>Derbyoides</i> sp. 1 .....	VR	<i>Heterelasma gibbosum</i> Cooper and Grant .....	R
<i>Echinauris subquadrata</i> Cooper and Grant .....	VR	<i>Hustedia ampullacea</i> Cooper and Grant .....	R
<i>Hystriculina ventroplana</i> Cooper and Grant .....	VR	<i>Hustedia lusca</i> Cooper and Grant .....	VA
<i>Kutorginella uddeni</i> Cooper and Grant .....	R	<i>Hustedia</i> sp. ....	R
<i>Linoproductus meniscus</i> Dunbar and Condra .....	VR	<i>Hustedia spicata</i> Cooper and Grant .....	VA
<i>Nudauris splendens</i> Cooper and Grant .....	C	<i>Institella leonardensis</i> (R.E. King) .....	A
<i>Reticulatia</i> sp. ....	VR	<i>Isogramma lobatum</i> Cooper and Grant .....	VR
<i>Rhynchopora</i> sp. ....	VR	<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR
		<i>Lepidospirifer angulatus</i> Cooper and Grant .....	R

	Rarity code		Rarity code
LOCALITY N702 - Continued			
<i>Lepidospirifer demissus</i> Cooper and Grant	C	<i>Dielasma anterolatum</i> Cooper and Grant	VR
<i>Linoproductus delicatus</i> Cooper and Grant	VR	<i>Dielasma perplexum</i> Cooper and Grant	VR
<i>Loxophragmus ellipticus</i> Cooper and Grant	C	<i>Diplanus lamellatus</i> (R.E. King)	VR
<i>Martinia miranda</i> Cooper and Grant	A	<i>Dyoros</i> ( <i>Lissosia</i> ) <i>vagabundus</i> Cooper and Grant	R
<i>Meekella calathica</i> Cooper and Grant	VA	<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>rectangulatus</i> Cooper and Grant	R
<i>Meekella occidentalis</i> (Newberry)	VR	<i>Echinauris irregularis</i> Cooper and Grant	R
<i>Megousia auriculata</i> Muir-Wood and Cooper	C	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper	R
<i>Megousia umbonata</i> Cooper and Grant	VR	<i>Elassonia petila</i> Cooper and Grant	VR
<i>Metriolepis carotica</i> Cooper and Grant	C	<i>Eolyttonia circularis</i> Cooper and Grant	C
<i>Metriolepis tegulata</i> Cooper and Grant	C	<i>Eolyttonia pocillata</i> Cooper and Grant	R
<i>Neophricadothyris bullata</i> Cooper and Grant	A	<i>Glossothyropsis</i> sp. 1 (Girty)	VR
<i>Neophricadothyris</i> sp. 1	VR	<i>Hercosia uddeni</i> (Böse)	C
<i>Neophricadothyris</i> sp. 2	VR	<i>Heterelasma gibbosum</i> Cooper and Grant	R
<i>Neophricadothyris</i> sp.	VR	<i>Hustedia lusca</i> Cooper and Grant	C
<i>Neospirifer mansuetus</i> Cooper and Grant	C	<i>Hustedia spicata</i> Cooper and Grant	SA
<i>Niviconia globosa</i> (R.E. King)	VA	<i>Lepidospirifer angulatus</i> Cooper and Grant	VR
<i>Nudauris linospina</i> Cooper and Grant	C	<i>Lepidospirifer demissus</i> Cooper and Grant	C
<i>Paucispinifera</i> sp.	VR	<i>Martinia miranda</i> Cooper and Grant	VR
<i>Peniculauris subcostata</i> (R.E. King)	C	<i>Meekella calathica</i> Cooper and Grant	A
<i>Petasmaia expansa</i> Cooper and Grant	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper	VR
<i>Phrenophoria nesiotis</i> Cooper and Grant	VR	<i>Metriolepis tegulata</i> Cooper and Grant	VR
<i>Phrenophoria vetula</i> Cooper and Grant	VR	<i>Neophricadothyris bullata</i> Cooper and Grant	R
<i>Pontisia stehlii stehlii</i> Cooper and Grant	VR	<i>Neophricadothyris</i> sp.	VR
<i>Pontisia stehlii tumidosa</i> Cooper and Grant	C	<i>Neospirifer mansuetus</i> Cooper and Grant	C
<i>Pseudoleptodus</i> sp.	VR	<i>Niviconia abrupta</i> Cooper and Grant	VR
<i>Ptygmactrum mordicum</i> Cooper and Grant	VR	<i>Niviconia globosa</i> (R.E. King)	VA
<i>Rallacosta actina</i> Cooper and Grant	R	<i>Nudauris linospina</i> Cooper and Grant	VR
<i>Reticulariina craticula</i> Cooper and Grant	C	<i>Peniculauris subcostata</i> (R.E. King)	VR
<i>Reticulariina venustula</i> Cooper and Grant	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant	C	<i>Pontisia stehlii tumidosa</i> Cooper and Grant	C
<i>Rhipidomella hispidula</i> Cooper and Grant	A	<i>Pseudoleptodus</i> sp.	VR
<i>Rhynchopora hebetata</i> Cooper and Grant	VR	<i>Reticulariina craticula</i> Cooper and Grant	R
<i>Rugatia occidentalis parvauris</i> (Newberry)	R	<i>Reticulariina venustula</i> Cooper and Grant	C
<i>Rugatia paraindica</i> (McKee)	C	<i>Rhamnaria tenuispinosa</i> Cooper and Grant	C
<i>Spiriferellina tricola</i> Cooper and Grant	VR	<i>Rhipidomella hispidula</i> Cooper and Grant	C
<i>Stenoscisma aptatum</i> Cooper and Grant	VR	<i>Rhynchopora hebetata</i> Cooper and Grant	VR
<i>Stenoscisma calvatum</i> Cooper and Grant	VR	<i>Rugatia paraindica</i> (McKee)	VR
<i>Stenoscisma doricranum</i> Cooper and Grant	R	<i>Spiriferellina tricola</i> Cooper and Grant	VR
<i>Stenoscisma exutum</i> Cooper and Grant	C	<i>Stenoscisma doricranum</i> Cooper and Grant	VA
<i>Stenoscisma fabarium</i> Cooper and Grant	VR	<i>Stenoscisma</i> sp.	VR
<i>Stenoscisma triquetrum</i> Cooper and Grant	C	<i>Stenoscisma triquetrum</i> Cooper and Grant	VR
<i>Tautosia fastigiata</i> Cooper and Grant	R	<i>Tautosia pulchra</i> Cooper and Grant	VR
<i>Tautosia pulchra</i> Cooper and Grant	VR	<i>Texarina wordensis</i> (R.E. King)	C
<i>Texarina paucula</i> Cooper and Grant	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper	C
<i>Texarina wordensis</i> (R.E. King)	C		
<i>Thamnosia anterospinosa</i> Cooper and Grant	R	LOCALITY N702a <sup>1</sup> : Cathedral Mountain Formation	
<i>Torynechus caelatus</i> Cooper and Grant	VR	<i>Cartorhium latum</i> (R.E. King)	R
<i>Trophisina fenaria</i> Cooper and Grant	C	<i>Choanodus irregularis</i> Cooper and Grant	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper	A	<i>Collemataria gregaria</i> Cooper and Grant	A
<i>Xestosia obsolescens</i> Cooper and Grant	VR	<i>Eolyttonia circularis</i> Cooper and Grant	C
		<i>Megousia auriculata</i> Muir-Wood and Cooper	VR
		<i>Neospirifer mansuetus</i> Cooper and Grant	R
LOCALITY N702a: Cathedral Mountain Formation			
<i>Acanthocrania</i> sp.	VR	LOCALITY N702b: Cathedral Mountain Formation	
<i>Acosarina mesoplatys</i> (R.E. King)	VA	<i>Acanthocrania</i> sp.	VR
<i>Anteridocus erugatus</i> Cooper and Grant	VR	<i>Acosarina mesoplatys</i> (R.E. King)	VA
<i>Anteridocus gongylus</i> Cooper and Grant	VA	<i>Anemonaria sublaevis</i> (R.E. King)	R
<i>Cartorhium latum</i> (R.E. King)	C	<i>Anteridocus gongylus</i> Cooper and Grant	R
<i>Cenorhynchia mitigata</i> Cooper and Grant	C	<i>Cancrinella</i> sp. 1	R
<i>Choanodus irregularis</i> Cooper and Grant	VR	<i>Cartorhium latum</i> (R.E. King)	C
<i>Chondronia bella</i> Cooper and Grant	VA	<i>Cenorhynchia mitigata</i> Cooper and Grant	VR
<i>Chonosteges variabilis</i> Cooper and Grant	C	<i>Choanodus irregularis</i> Cooper and Grant	VR
<i>Composita crassa</i> Cooper and Grant	VR	<i>Choanodus perfectus</i> Cooper and Grant	C
<i>Composita</i> sp.	C	<i>Chondronia bella</i> Cooper and Grant	VR
<i>Derbyia laqueata</i> Cooper and Grant	R	<i>Chonosteges variabilis</i> Cooper and Grant	C
		<i>Collemataria gregaria</i> Cooper and Grant	R

	Rarity code		Rarity code
LOCALITY N702b - Continued			
<i>Composita bucculenta</i> Cooper and Grant .....	R	<i>Thedusia bucrenata</i> Cooper and Grant .....	R
<i>Composita imbricata</i> Cooper and Grant .....	C	<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	A
<i>Compressoproducitus curtus</i> Cooper and Grant .....	C	LOCALITY N702c : Road Canyon Formation	
<i>Derbyia informis</i> Cooper and Grant .....	R	<i>Acanthocrania densispina</i> Cooper and Grant .....	C
<i>Derbyia laqueata</i> Cooper and Grant .....	A	<i>Acosarina mesoplatys</i> (R.E. King) .....	SA
<i>Derbyia</i> sp. ....	VR	<i>Acritosia? vestibula</i> Cooper and Grant .....	C
<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR	<i>Anteridocus erugatus</i> Cooper and Grant .....	A
<i>Dielasma</i> sp. ....	VR	<i>Cenorhynchia atmata</i> Cooper and Grant .....	C
<i>Dyoros (Dyoros) extensiformis</i> Cooper and Grant .....	VR	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	R
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	A	<i>Cenorhynchia parvula</i> Cooper and Grant .....	R
<i>Dyoros (Tetragonetes) giganteus</i> Cooper and Grant .....	VR	<i>Cenorhynchia saginata</i> Cooper and Grant .....	C
<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant .....	C	<i>Chondronia ovalis</i> Cooper and Grant .....	C
<i>Echinauris irregularis</i> Cooper and Grant .....	C	<i>Chonosteges costellatus</i> Cooper and Grant .....	R
<i>Echinauris</i> sp. ....	C	<i>Collemataria gregaria</i> Cooper and Grant .....	R
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR	<i>Composita stalagmium</i> Cooper and Grant .....	VA
<i>Eolyttonia chaotica</i> Cooper and Grant .....	VR	<i>Cooperina parva</i> Cooper and Grant .....	R
<i>Eolyttonia circularis</i> Cooper and Grant .....	VR	<i>Cooperina subcuneata</i> Cooper and Grant .....	VR
<i>Eolyttonia pocillata</i> Cooper and Grant .....	C	<i>Crurithyris minutalis</i> Cooper and Grant .....	VA
<i>Glossothyropsis</i> sp. 1 (Girty) .....	VR	<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	VA
<i>Goniarina</i> sp. 2 .....	VR	<i>Derbyia cincinnata</i> Cooper and Grant .....	R
<i>Grandaurispina</i> sp. 3 .....	VR	<i>Derbyia informis</i> Cooper and Grant .....	C
<i>Grandaurispina? vaga</i> Cooper and Grant .....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	A
<i>Hercosia uddeni</i> (Böse) .....	VA	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	A
<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Hustedia ampullacea</i> Cooper and Grant .....	R	<i>Dyoros (Dyoros) extensiformis</i> Cooper and Grant .....	C
<i>Hustedia compressa</i> Cooper and Grant .....	VR	<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant .....	VR
<i>Hustedia lusca</i> Cooper and Grant .....	A	<i>Echinauris bella</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	R	<i>Echinauris crassa</i> Cooper and Grant .....	VR
<i>Hustedia spicata</i> Cooper and Grant .....	VA	<i>Echinauris irregularis</i> Cooper and Grant .....	VA
<i>Hustedia trisepta</i> Cooper and Grant .....	C	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	A
<i>Institella leonardensis</i> (R.E. King) .....	VA	<i>Elassonia micraria</i> Cooper and Grant .....	VA
<i>Isogramma lobatum</i> Cooper and Grant .....	VR	<i>Eolyttonia chaotica</i> Cooper and Grant .....	C
<i>Kochiproductus</i> sp. 6 .....	VR	<i>Hercosestria cribrosa</i> Cooper and Grant .....	SA
<i>Lepidospirifer inferus</i> Cooper and Grant .....	C	<i>Heterelasma glansfagea</i> Cooper and Grant .....	A
<i>Loxophragmus ellipticus</i> Cooper and Grant .....	A	<i>Holotricharina hirsuta</i> Cooper and Grant .....	VA
<i>Martinia miranda</i> Cooper and Grant .....	VA	<i>Hustedia ampullacea</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	VA	<i>Hustedia connorsii</i> Cooper and Grant .....	SA
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	C	<i>Hustedia narinosa</i> Cooper and Grant .....	VA
<i>Metriolepis carotica</i> Cooper and Grant .....	R	<i>Kutorginella sullivanensis</i> (R.E. King) .....	R
<i>Metriolepis larina</i> Cooper and Grant .....	VR	<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	A
<i>Metriolepis tegulata</i> Cooper and Grant .....	C	<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	A
<i>Neophricadothyris bullata</i> Cooper and Grant .....	A	<i>Meekella calathica</i> Cooper and Grant .....	VA
<i>Neospirifer mansuetus</i> Cooper and Grant .....	C	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	C
<i>Niviconia globosa</i> (R.E. King) .....	VA	<i>Metriolepis</i> sp. ....	VR
<i>Nudauris linospina</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	VA
<i>Paucispinifera</i> sp. ....	VR	<i>Neospirifer thescelus</i> Cooper and Grant .....	C
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Paucispinifera</i> sp. ....	VR
<i>Petasmaia expansa</i> Cooper and Grant .....	C	<i>Paucispinifera sulcata</i> Cooper and Grant .....	VA
<i>Phrenophoria planifrons</i> Cooper and Grant .....	VR	<i>Peniculauris peniculifera</i> Cooper and Grant .....	VR
<i>Phrenophoria vetula</i> Cooper and Grant .....	VR	<i>Peniculauris subcostata</i> (R.E. King) .....	VR
<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	R	<i>Peniculauris transversa</i> Cooper and Grant .....	C
<i>Ptygmactrum angulatum</i> Cooper and Grant .....	R	<i>Petasmatherus nitidus</i> Cooper and Grant .....	VR
<i>Ptygmactrum mordicum</i> Cooper and Grant .....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	A
<i>Rallacosta actina</i> Cooper and Grant .....	R	<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	C
<i>Reticulariina</i> sp. ....	VR	<i>Reticulariina craticula</i> Cooper and Grant .....	VA
<i>Reticulariina venustula</i> Cooper and Grant .....	VR	<i>Reticulariina venustula</i> Cooper and Grant .....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	C	<i>Rhamnaria</i> sp. ....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	A	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	C
<i>Rugatia paraindica</i> (McKee) .....	VR	<i>Rhamnaria vinnula</i> Cooper and Grant .....	R
<i>Stenoscisma exutum</i> Cooper and Grant .....	R	<i>Rhynchopora hebetata</i> Cooper and Grant .....	R
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	A	<i>Rhynchopora sphenoides</i> Cooper and Grant .....	VR
<i>Tautosia fastigiata</i> Cooper and Grant .....	A	<i>Rugatia convexa</i> Cooper and Grant .....	R
<i>Tautosia</i> sp. ....	VR	<i>Rugatia incurvata</i> (R.E. King) .....	C
<i>Texarina wordensis</i> (R.E. King) .....	R	<i>Spinarella paulula</i> Cooper and Grant .....	R

	Rarity code		Rarity code
LOCALITY N702c - Continued			
<i>Spinarella perfecta</i> Cooper and Grant .....	R	<i>Composita apsidata</i> Cooper and Grant .....	A
<i>Spiriferellina tricola</i> Cooper and Grant .....	A	<i>Compressoproductus</i> sp. 1 .....	VR
<i>Stenoscisma aptatum</i> Cooper and Grant .....	C	<i>Crurithyris</i> sp. c .....	C
<i>Stenoscisma calvatum</i> Cooper and Grant .....	R	<i>Derbyia crenulata</i> Girty .....	VR
<i>Stenoscisma camurum</i> Cooper and Grant .....	VR	<i>Dielasma longisulcatum</i> Cooper and Grant .....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	VR
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	A	<i>Enteleles subcircularis</i> Cooper and Grant .....	C
<i>Texarina wordensis</i> (R.E. King) .....	A	<i>Goniarina futilis</i> Cooper and Grant .....	VR
<i>Tschernyschewia</i> sp. ....	VR	<i>Heterelasma</i> sp. 4 .....	VR
<i>Waagenoconcha convexa</i> Cooper and Grant .....	C	<i>Hustedia cepacea</i> Cooper and Grant .....	A
<i>Waagenoconcha platys</i> Cooper and Grant .....	VR	<i>Limbella</i> sp. 1 .....	VR
LOCALITY N702d : Hess Formation, Taylor Ranch			
Member			
<i>Acolosia elliptica</i> Cooper and Grant .....	R	<i>Linoproductus undatus</i> Cooper and Grant .....	R
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Meekella hessensis</i> R.E. King .....	R
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	<i>Neospirifer notialis</i> Cooper and Grant .....	C
<i>Acritosia solida</i> Cooper and Grant .....	C	<i>Oncosarina whitei</i> (R.E. King) .....	C
<i>Antronaria speciosa</i> Cooper and Grant .....	C	<i>Peniculauris imitata</i> Cooper and Grant .....	C
<i>Antronaria transversa</i> (R.E. King) .....	C	<i>Rhipidomella hessensis</i> R.E. King .....	VA
<i>Chondronia ningula</i> Cooper and Grant .....	R	<i>Rugaria hessensis</i> (R.E. King) .....	A
<i>Chonosteges limbatus</i> Cooper and Grant .....	R	<i>Spyridiophora reticulata</i> (R.E. King) .....	R
<i>Collemataria</i> sp. ....	R	<i>Stenoscisma doricranum</i> Cooper and Grant .....	VR
<i>Composita apsidata</i> Cooper and Grant .....	R	<i>Stenoscisma hadrum</i> Cooper and Grant .....	C
<i>Composita</i> sp. ....	R	<i>Stenoscisma</i> sp. ....	VR
<i>Compressoproductus</i> sp. 5 .....	VR	<i>Teguliferina compacta</i> Cooper and Grant .....	VR
<i>Cooperina parva</i> Cooper and Grant .....	R	<i>Thamnosia silicica</i> Cooper and Grant .....	C
<i>Crurithyris</i> sp. b .....	VR	LOCALITY N702ent : Cathedral Mountain Formation	
<i>Cyclacantharia</i> sp. 4 .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Derbyia crenulata</i> Girty .....	R	<i>Anemonaria sublaevis</i> (R.E. King) .....	VR
<i>Dielasma longisulcatum</i> Cooper and Grant .....	VR	<i>Anteridocus erugatus</i> Cooper and Grant .....	R
<i>Diplanus lamellatus</i> (R.E. King) .....	A	<i>Anteridocus gongylus</i> Cooper and Grant .....	VR
<i>Edriosteges</i> sp. 1 .....	R	<i>Antronaria speciosa</i> Cooper and Grant .....	VR
<i>Elassonia sobrina</i> Cooper and Grant .....	R	<i>Cartorhium latum</i> (R.E. King) .....	VR
<i>Enteleles subcircularis</i> Cooper and Grant .....	R	<i>Chondronia bella</i> Cooper and Grant .....	C
<i>Eolyttonia</i> sp. 1 .....	R	<i>Chonosteges variabilis</i> Cooper and Grant .....	VR
<i>Goniarina appeli</i> Cooper and Grant .....	VR	<i>Collemataria gregaria</i> Cooper and Grant .....	C
<i>Goniarina futilis</i> Cooper and Grant .....	R	<i>Composita bucculenta</i> Cooper and Grant .....	C
<i>Hustedia cepacea</i> Cooper and Grant .....	C	<i>Composita</i> sp. ....	C
<i>Limbella</i> sp. 1 .....	VR	<i>Compressoproductus curtus</i> Cooper and Grant .....	VR
<i>Linoproductus undatus</i> Cooper and Grant .....	R	<i>Derbyia laqueata</i> Cooper and Grant .....	VR
<i>Meekella hessensis</i> R.E. King .....	R	<i>Dielasma perplexum</i> Cooper and Grant .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	VR
<i>Neospirifer neali</i> Cooper and Grant .....	R	<i>Echinaris irregularis</i> Cooper and Grant .....	C
<i>Neospirifer notialis</i> Cooper and Grant .....	R	<i>Enteleles leonardensis</i> R.E. King .....	C
<i>Oncosarina whitei</i> (R.E. King) .....	R	<i>Eolyttonia circularis</i> Cooper and Grant .....	VR
<i>Peniculauris imitata</i> Cooper and Grant .....	C	<i>Eolyttonia pocillata</i> Cooper and Grant .....	VR
<i>Pontisia nanas</i> (Stehli) .....	VR	<i>Grandaurispina? vaga</i> Cooper and Grant .....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	R	<i>Hercosia uddeni</i> (Böse) .....	VR
<i>Rugaria hessensis</i> (R.E. King) .....	R	<i>Hustedia spicata</i> Cooper and Grant .....	A
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Spyridiophora reticulata</i> (R.E. King) .....	R	<i>Loxophragmus ellipticus</i> Cooper and Grant .....	VR
<i>Stenoscisma hadrum</i> Cooper and Grant .....	R	<i>Meekella calathica</i> Cooper and Grant .....	R
<i>Teguliferina compacta</i> Cooper and Grant .....	VR	<i>Metriolepis carotica</i> Cooper and Grant .....	VR
<i>Thamnosia silicica</i> Cooper and Grant .....	R	<i>Neophricadothyris bullata</i> Cooper and Grant .....	C
<i>Tropidlasma costellatum</i> Cooper and Grant .....	R	<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR
<i>Tschernyschewia inexpectans</i> Cooper and Grant .....	VR	<i>Niviconia globosa</i> (R.E. King) .....	C
LOCALITY N702e : Hess Formation, Taylor Ranch			
Member			
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	A	<i>Rhipidomella hispidula</i> Cooper and Grant .....	R
<i>Antronaria speciosa</i> Cooper and Grant .....	R	<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR
<i>Antronaria transversa</i> (R.E. King) .....	A	<i>Stenoscisma doricranum</i> Cooper and Grant .....	C
<i>Chondronia ningula</i> Cooper and Grant .....	C	<i>Stenoscisma triquetrum</i> Cooper and Grant .....	VR
<i>Chonosteges limbatus</i> Cooper and Grant .....	C	<i>Tautosia pulchra</i> Cooper and Grant .....	C
		<i>Texarina wordensis</i> (R.E. King) .....	VR
		<i>Thamnosia anterospinosa</i> Cooper and Grant .....	VR
		LOCALITY N702f : Hess Formation, Taylor Ranch	
		Member	
		<i>Antronaria speciosa</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY N702f - Continued			
<i>Antronaria transversa</i> (R.E. King) .....	VR	<i>Dielasma perplexum</i> Cooper and Grant .....	R
<i>Composita bucculenta</i> Cooper and Grant .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	R
<i>Dielasma longisulcatum</i> Cooper and Grant .....	VR	<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	VR
<i>Enteleles subcircularis</i> Cooper and Grant .....	R	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR
<i>Eolyttonia</i> sp. ....	VR	<i>Enteleles leonardensis</i> R.E. King .....	C
<i>Limbella</i> sp. 1 .....	VR	<i>Eolyttonia circularis</i> Cooper and Grant .....	C
<i>Linoproductus undatus</i> Cooper and Grant .....	R	<i>Eolyttonia pocillata</i> Cooper and Grant .....	C
<i>Meekella hessensis</i> R.E. King .....	VR	<i>Hercosia uddeni</i> (Böse) .....	A
<i>Oncosarina whitei</i> (R.E. King) .....	R	<i>Hustedia ampullacea</i> Cooper and Grant .....	VR
<i>Peniculauris imitata</i> Cooper and Grant .....	R	<i>Hustedia lusca</i> Cooper and Grant .....	A
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Hustedia spicata</i> Cooper and Grant .....	VA
<i>Thamnusia silicica</i> Cooper and Grant .....	VR	<i>Institella leonardensis</i> (R.E. King) .....	A
<i>Tschernyschewia inexpectans</i> Cooper and Grant .....	VR	<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR
LOCALITY N702h : Neal Ranch Formation			
<i>Linoproductus semisulcatus</i> Cooper and Grant .....	VR	<i>Lepidospirifer angulatus</i> Cooper and Grant .....	VR
LOCALITY N702inst : Cathedral Mountain Formation			
<i>Cartorhium latum</i> (R.E. King) .....	VR	<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR
<i>Composita stalagmium</i> Cooper and Grant .....	C	<i>Linoproductus delicatus</i> Cooper and Grant .....	VR
<i>Derbyia informis</i> Cooper and Grant .....	VR	<i>Loxophragmus ellipticus</i> Cooper and Grant .....	VR
<i>Derbyia laqueata</i> Cooper and Grant .....	VR	<i>Martinia miranda</i> Cooper and Grant .....	R
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR	<i>Meekella calathica</i> Cooper and Grant .....	C
<i>Institella leonardensis</i> (R.E. King) .....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	VR	<i>Megousia umbonata</i> Cooper and Grant .....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	C
<i>Niviconia globosa</i> (R.E. King) .....	R	<i>Neospirifer mansuetus</i> Cooper and Grant .....	R
<i>Nudauris linospina</i> Cooper and Grant .....	VR	<i>Niviconia globosa</i> (R.E. King) .....	VA
<i>Phrenophoria vetula</i> Cooper and Grant .....	VR	<i>Nudauris linospina</i> Cooper and Grant .....	R
<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	VR	<i>Peniculauris subcostata</i> (R.E. King) .....	VR
<i>Rallacosta actina</i> Cooper and Grant .....	VR	<i>Petasmaia expansa</i> Cooper and Grant .....	R
<i>Rhipidomella hispidula</i> Cooper and Grant .....	R	<i>Petasmatherus mundus</i> Cooper and Grant .....	R
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR	<i>Phrenophoria vetula</i> Cooper and Grant .....	VR
LOCALITY N702j : Gaptank Formation, Uddenites			
Member			
<i>Meekella texana</i> R.E. King .....	R	<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	R
<i>Neochonetes liratus</i> Cooper and Grant .....	VR	<i>Rhipidomella hispidula</i> Cooper and Grant .....	C
<i>Parenteleles cooperi</i> R.E. King .....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Rugatia paraindica</i> (McKee) .....	R
LOCALITY N702k : Gaptank Formation, Uddenites			
Member			
<i>Meekella texana</i> R.E. King .....	VR	<i>Stenoscisma doricranum</i> Cooper and Grant .....	C
<i>Parenteleles cooperi</i> R.E. King .....	VR	<i>Stenoscisma exutum</i> Cooper and Grant .....	R
LOCALITY N702-low : Cathedral Mountain Formation			
<i>Acosarina mesoplatys</i> (R.E. King) .....	C	<i>Stenoscisma fabarium</i> Cooper and Grant .....	R
<i>Anteridocus gongylus</i> Cooper and Grant .....	R	<i>Stenoscisma triquetrum</i> Cooper and Grant .....	C
<i>Antronaria speciosa</i> Cooper and Grant .....	VR	<i>Taphroestria? sp.</i> .....	VR
<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR	<i>Tautosia pulchra</i> Cooper and Grant .....	VR
<i>Cenorhynchia saginata</i> Cooper and Grant .....	VR	<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Chaeniorhynchus inauris</i> Cooper and Grant .....	VR	<i>Thamnusia anterospinosa</i> Cooper and Grant .....	R
<i>Choanodus irregularis</i> Cooper and Grant .....	VR	<i>Trophisina fenaria</i> Cooper and Grant .....	C
<i>Chondronia bella</i> Cooper and Grant .....	A	<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	R	LOCALITY N702m : Hess Formation, Taylor Ranch	
<i>Collemataria gregaria</i> Cooper and Grant .....	A	Member	
<i>Composita bucculenta</i> Cooper and Grant .....	C	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Composita sp.</i> .....	C	<i>Antronaria speciosa</i> Cooper and Grant .....	VR
<i>Composita stalagmium</i> Cooper and Grant .....	C	<i>Chondronia ningula</i> Cooper and Grant .....	VR
<i>Compressoproductus curtus</i> Cooper and Grant .....	VR	<i>Composita bucculenta</i> Cooper and Grant .....	VR
<i>Derbyia complicata</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Derbyia informis</i> Cooper and Grant .....	R	<i>Enteleles subcircularis</i> Cooper and Grant .....	R
<i>Derbyia laqueata</i> Cooper and Grant .....	C	<i>Eolyttonia</i> sp. ....	VR
<i>Dielasma obesum</i> Cooper and Grant .....	VR	<i>Limbella</i> sp. 1 .....	VR
		<i>Linoproductus undatus</i> Cooper and Grant .....	VR
		<i>Oncosarina whitei</i> (R.E. King) .....	VR
		<i>Peniculauris imitata</i> Cooper and Grant .....	C
		<i>Thamnusia silicica</i> Cooper and Grant .....	VR
		<i>Tschernyschewia inexpectans</i> Cooper and Grant .....	VR
		LOCALITY N702n : Gaptank Formation, Uddenites	
		Member	
		<i>Echinaria cf. moorei</i> (Dunbar and Condra) .....	VR



	Rarity code		Rarity code
LOCALITY N702n - Continued			
<i>Eridmatus</i> sp. ....	VR	<i>Dyoros (Dyoros) extensiformis</i> Cooper and Grant.....	R
<i>Hystriculina</i> sp. ....	VR	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant.....	C
<i>Isogramma</i> sp. ....	VR	<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant.....	R
<i>Kochiproductus primitivus</i> Cooper and Grant.....	VR	<i>Echinauris irregularis</i> Cooper and Grant.....	C
<i>Kutorginella uddeni</i> Cooper and Grant.....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	VR
<i>Limbella costellata</i> Cooper and Grant.....	VR	<i>Elassonia petila</i> Cooper and Grant.....	VR
<i>Meekella prionota</i> Cooper and Grant.....	VR	<i>Enteleutes leonardensis</i> R.E. King.....	R
<i>Meekella texana</i> R.E. King.....	VR	<i>Eolyttonia chaotica</i> Cooper and Grant.....	R
<i>Neospirifer apothescelus</i> Cooper and Grant.....	VR	<i>Eolyttonia circularis</i> Cooper and Grant.....	C
<i>Nudauris splendens</i> Cooper and Grant.....	VR	<i>Eolyttonia pocillata</i> Cooper and Grant.....	C
<i>Parenteleutes cooperi</i> R.E. King.....	VR	<i>Eolyttonia</i> sp. 2.....	VR
<i>Scacchinella triangulata</i> Cooper and Grant.....	VR	<i>Grandaurispina? vaga</i> Cooper and Grant.....	C
<i>Teguliferina boesei</i> R.E. King.....	R	<i>Hercosia uddeni</i> (Böse).....	VA
LOCALITY N702q : Gaptank Formation, Uddenites			
Member			
<i>Derbyia</i> sp. ....	VR	<i>Heterelasma gibbosum</i> Cooper and Grant.....	R
<i>Echinaria</i> cf. <i>moorei</i> (Dunbar and Condra).....	VR	<i>Hustedia ampullacea</i> Cooper and Grant.....	VR
<i>Gypospirifer anancites</i> Cooper and Grant.....	VR	<i>Hustedia lusca</i> Cooper and Grant.....	VA
<i>Hystriculina sulcata</i> Cooper and Grant.....	VR	<i>Hustedia</i> sp. ....	VR
<i>Kochiproductus primitivus</i> Cooper and Grant.....	VR	<i>Hustedia spicata</i> Cooper and Grant.....	C
<i>Kochiproductus</i> sp. ....	VR	<i>Institella leonardensis</i> (R.E. King).....	A
<i>Linoproductus</i> sp. ....	VR	<i>Kochiproductus</i> sp. 6.....	VR
<i>Meekella texana</i> R.E. King.....	VR	<i>Lepidospirifer angulatus</i> Cooper and Grant.....	VR
<i>Parenteleutes cooperi</i> R.E. King.....	R	<i>Lepidospirifer demissus</i> Cooper and Grant.....	C
<i>Scacchinella triangulata</i> Cooper and Grant.....	R	<i>Loxophragmus ellipticus</i> Cooper and Grant.....	R
<i>Teguliferina boesei</i> R.E. King.....	VR	<i>Martinia miranda</i> Cooper and Grant.....	C
<i>Tropidelasma</i> sp. 2.....	VR	<i>Meekella calathica</i> Cooper and Grant.....	VA
LOCALITY N702r : Gaptank Formation, Uddenites			
Member			
<i>Juresania</i> sp. 1.....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR
<i>Parenteleutes cooperi</i> R.E. King.....	VR	<i>Metriolepis carotica</i> Cooper and Grant.....	C
<i>Parenteleutes superbus</i> Cooper and Grant.....	VR	<i>Metriolepis tegulata</i> Cooper and Grant.....	R
<i>Scacchinella triangulata</i> Cooper and Grant.....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant.....	A
<i>Teguliferina boesei</i> R.E. King.....	VR	<i>Neospirifer mansuetus</i> Cooper and Grant.....	C
LOCALITY N702t : Neal Ranch Formation			
<i>Nudauris tribulosa</i> Cooper and Grant.....	VR	<i>Niviconia globosa</i> (R.E. King).....	VA
LOCALITY N702un : Cathedral Mountain Formation			
<i>Acosarina mesoplatys</i> (R.E. King).....	VA	<i>Nudauris linsospina</i> Cooper and Grant.....	R
<i>Anemonaria sublaevis</i> (R.E. King).....	VR	<i>Peniculauris subcostata</i> (R.E. King).....	VR
<i>Anteridocus gongylus</i> Cooper and Grant.....	C	<i>Petasmaia expansa</i> Cooper and Grant.....	C
<i>Antronaria speciosa</i> Cooper and Grant.....	VR	<i>Petrocrania</i> sp. ....	VR
<i>Cartorhynchium latum</i> (R.E. King).....	C	<i>Pontisia stehlii tumidosa</i> Cooper and Grant.....	R
<i>Cenorhynchia mitigata</i> Cooper and Grant.....	R	<i>Rallacosta actina</i> Cooper and Grant.....	VR
<i>Choanodus irregularis</i> Cooper and Grant.....	R	<i>Reticulariina venustula</i> Cooper and Grant.....	VR
<i>Choanodus perfectus</i> Cooper and Grant.....	A	<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	C
<i>Chondronia bella</i> Cooper and Grant.....	R	<i>Rhipidomella hispidula</i> Cooper and Grant.....	A
<i>Chonosteges costellatus</i> Cooper and Grant.....	R	<i>Rhynchopora hebetata</i> Cooper and Grant.....	R
<i>Chonosteges variabilis</i> Cooper and Grant.....	A	<i>Rugatia paraindica</i> (McKee).....	C
<i>Collemataria gregaria</i> Cooper and Grant.....	C	<i>Stenoscisma aptatum</i> Cooper and Grant.....	VR
<i>Composita bucculenta</i> Cooper and Grant.....	C	<i>Stenoscisma calvatum</i> Cooper and Grant.....	C
<i>Composita imbricata</i> Cooper and Grant.....	R	<i>Stenoscisma doricranum</i> Cooper and Grant.....	C
<i>Composita</i> sp. ....	A	<i>Stenoscisma triquetrum</i> Cooper and Grant.....	VR
<i>Compressoproductus thomasi</i> Cooper and Grant.....	VR	<i>Tautosia fastigiata</i> Cooper and Grant.....	VR
<i>Derbyia complicata</i> Cooper and Grant.....	VR	<i>Texarina wordensis</i> (R.E. King).....	R
<i>Derbyia informis</i> Cooper and Grant.....	R	<i>Thamnosia anterospinosa</i> Cooper and Grant.....	R
<i>Derbyia laqueata</i> Cooper and Grant.....	C	<i>Thedusia bucrenata</i> Cooper and Grant.....	VR
<i>Derbyia</i> sp. ....	R	<i>Torynechus caelatus</i> Cooper and Grant.....	C
<i>Dielasma perplexum</i> Cooper and Grant.....	VR	<i>Trophisina fenaria</i> Cooper and Grant.....	A
<i>Dielasma</i> sp. ....	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	C
<i>Diplanus lamellatus</i> (R.E. King).....	VR	<i>Xestosia obsolescens</i> Cooper and Grant.....	C
LOCALITY N703 : Road Canyon Formation			
		<i>Acosarina mesoplatys</i> (R.E. King).....	C
		<i>Ametoria residua</i> Cooper and Grant.....	VR
		<i>Chonetinetes angustisulcatus</i> Cooper and Grant.....	VR
		<i>Collemataria</i> sp. ....	VR
		<i>Composita crassa</i> Cooper and Grant.....	VR
		<i>Crurithyris minutalis</i> Cooper and Grant.....	R
		<i>Cyclacantharia paucispinosa</i> Cooper and Grant.....	VR
		<i>Derbyia cincinnata</i> Cooper and Grant.....	VR
		<i>Derbyia complicata</i> Cooper and Grant.....	VR



	Rarity code		Rarity code
LOCALITY N703 - Continued			
<i>Derbyia informis</i> Cooper and Grant.....	R	<i>Echinauris crassa</i> Cooper and Grant.....	R
<i>Derbyia laqueata</i> Cooper and Grant.....	VR	<i>Echinauris irregularis</i> Cooper and Grant.....	A
<i>Dielasma ellipsoideum</i> Cooper and Grant.....	VR	<i>Echinauris</i> sp. ....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant.....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	A
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>solidus</i> Cooper and Grant.....	C	<i>Elassonia micraria</i> Cooper and Grant.....	R
<i>Echinauris bella</i> Cooper and Grant.....	R	<i>Eolyttonia chaotica</i> Cooper and Grant.....	R
<i>Echinauris lappacea</i> Cooper and Grant.....	R	<i>Hercosestria cribrosa</i> Cooper and Grant.....	VA
<i>Echinauris liumbona</i> Cooper and Grant.....	C	<i>Holotricharina hirsuta</i> Cooper and Grant.....	R
<i>Echinauris parva</i> Cooper and Grant.....	R	<i>Holotricharina?</i> sp. 1 .....	VR
<i>Echinauris</i> sp. ....	A	<i>Hustedia connorsii</i> Cooper and Grant.....	C
<i>Eolyttonia</i> sp. ....	VR	<i>Hustedia consuta</i> Cooper and Grant.....	A
<i>Goniarina</i> sp. ....	VR	<i>Hustedia narinosa</i> Cooper and Grant.....	C
<i>Grandaurispina</i> sp. 1 .....	VR	<i>Hustedia</i> sp. ....	VR
<i>Hercosestria cribrosa</i> Cooper and Grant.....	VR	<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	VR
<i>Holotricharina hirsuta</i> Cooper and Grant.....	VR	<i>Meekella calathica</i> Cooper and Grant.....	VA
<i>Hustedia consuta</i> Cooper and Grant.....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R
<i>Hustedia narinosa</i> Cooper and Grant.....	VR	<i>Mesolobus?</i> <i>permianus</i> Cooper and Grant.....	VR
<i>Hustedia</i> sp. ....	R	<i>Metriolepis larina</i> Cooper and Grant.....	R
<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	VR	<i>Metriolepis tegulata</i> Cooper and Grant.....	VR
<i>Meekella calathica</i> Cooper and Grant.....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant.....	A
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R	<i>Neophricadothyris crassibacca</i> Cooper and Grant.....	VR
<i>Metriolepis tegulata</i> Cooper and Grant.....	VR	<i>Neospirifer bakeri bakeri</i> R.E. King.....	R
<i>Neophricadothyris bullata</i> Cooper and Grant.....	R	<i>Neospirifer thescelus</i> Cooper and Grant.....	R
<i>Neospirifer bakeri bakeri</i> R.E. King.....	R	<i>Paraspiriferina</i> sp. ....	VR
<i>Paucispinifera costellata</i> Cooper and Grant.....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant.....	C
<i>Peniculauris costata</i> Cooper and Grant.....	VR	<i>Peniculauris peniculifera</i> Cooper and Grant.....	R
<i>Phrenophoria planiventra</i> Cooper and Grant.....	VR	<i>Petasmatherus</i> sp. ....	VR
<i>Pseudoleptodus?</i> <i>giganteus</i> Cooper and Grant.....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant.....	R
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	R	<i>Pontisia stehlii tumidosa</i> Cooper and Grant.....	R
<i>Roemerella gigantissima</i> Cooper and Grant.....	VR	<i>Reticulariina craticula</i> Cooper and Grant.....	C
<i>Rugatia incurvata</i> (R.E. King) .....	VR	<i>Reticulariina venustula</i> Cooper and Grant.....	R
<i>Stenoscisma</i> sp. ....	VR	<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR
<i>Stenoscisma triquetrum</i> Cooper and Grant.....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant.....	R
<i>Tautosia galbina</i> Cooper and Grant.....	VR	<i>Rugatia incurvata</i> (R.E. King) .....	R
<i>Thedusia mesocostata</i> Cooper and Grant.....	VR	<i>Rugatia paraindica</i> (McKee).....	VR
<i>Thedusia</i> sp. ....	VR	<i>Spiriferellina tricola</i> Cooper and Grant.....	A
<i>Waagenoconcha convexa</i> Cooper and Grant.....	C	<i>Stenoscisma calvatum</i> Cooper and Grant.....	VR
<i>Xenosteges trivialis</i> Cooper and Grant.....	VR	<i>Stenoscisma</i> sp. ....	VR
LOCALITY N703a : Road Canyon Formation			
<i>Acanthocrania densispina</i> Cooper and Grant.....	R	<i>Stenoscisma triquetrum</i> Cooper and Grant.....	R
<i>Acosarina mesoplatys</i> (R.E. King) .....	VA	<i>Texarina wordensis</i> (R.E. King) .....	C
<i>Amphipella attenuata</i> Cooper and Grant.....	VR	<i>Thedusia mesocostata</i> Cooper and Grant.....	VR
<i>Bothrostegium</i> sp. ....	VR	<i>Tropidelasma corniculum</i> Cooper and Grant.....	VR
<i>Cenorhynchia atmata</i> Cooper and Grant.....	VR	<i>Waagenoconcha convexa</i> Cooper and Grant.....	R
<i>Cenorhynchia parvula</i> Cooper and Grant.....	C	<i>Xenosteges magnus</i> Cooper and Grant.....	C
<i>Chaeniorhynchus salutare</i> Cooper and Grant.....	R	LOCALITY N703a <sup>1</sup> : Cathedral Mountain Formation	
<i>Chondronia ovalis</i> Cooper and Grant.....	C	<i>Acosarina mesoplatys</i> (R.E. King) .....	A
<i>Chonetinetes angustisulcatus</i> Cooper and Grant.....	VR	<i>Anteridocus gongylus</i> Cooper and Grant.....	C
<i>Chonosteges costellatus</i> Cooper and Grant.....	VR	<i>Cartorhium latum</i> (R.E. King) .....	C
<i>Collemataria gregaria</i> Cooper and Grant.....	C	<i>Cenorhynchia parvula</i> Cooper and Grant.....	VR
<i>Composita crassa</i> Cooper and Grant.....	A	<i>Choanodus irregularis</i> Cooper and Grant.....	C
<i>Composita</i> sp. ....	R	<i>Choanodus perfectus</i> Cooper and Grant.....	VR
<i>Composita stalagmium</i> Cooper and Grant.....	VR	<i>Chondronia bella</i> Cooper and Grant.....	R
<i>Compressopproductus</i> sp. 3 .....	VR	<i>Chonosteges costellatus</i> Cooper and Grant.....	A
<i>Cyclacantharia paucispinosa</i> Cooper and Grant.....	VA	<i>Collemataria gregaria</i> Cooper and Grant.....	A
<i>Derbyia complicata</i> Cooper and Grant.....	VR	<i>Composita crassa</i> Cooper and Grant.....	R
<i>Derbyia informis</i> Cooper and Grant.....	C	<i>Compressopproductus</i> sp. ....	VR
<i>Derbyia laqueata</i> Cooper and Grant.....	A	<i>Cooperina parva</i> Cooper and Grant.....	VR
<i>Derbyia</i> sp. ....	VR	<i>Derbyia laqueata</i> Cooper and Grant.....	R
<i>Dielasma ellipsoideum</i> Cooper and Grant.....	VR	<i>Dielasma perplexum</i> Cooper and Grant.....	VR
<i>Dielasma</i> sp. ....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensiformis</i> Cooper and Grant.....	VR
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>rectangulatus</i> Cooper and Grant.....	VR	<i>Dyoros</i> ( <i>Lissosia</i> ) <i>vagabundus</i> Cooper and Grant.....	C
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>solidus</i> Cooper and Grant.....	VR	<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>rectangulatus</i> Cooper and Grant.....	VR
<i>Echinauris bella</i> Cooper and Grant.....	VR	<i>Echinauris irregularis</i> Cooper and Grant.....	C
		<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	A

	Rarity code		Rarity code
LOCALITY N703a <sup>1</sup> - Continued			
<i>Edriosteges tenuispinosus</i> Cooper and Grant.....	VR	<i>Heterelasma gibbosum</i> Cooper and Grant.....	VR
<i>Eolyttonia circularis</i> Cooper and Grant.....	VR	<i>Heterelasma</i> sp. ....	VR
<i>Hercosia uddeni</i> (Bose) .....	A	<i>Hustedia ampullacea</i> Cooper and Grant.....	R
<i>Hustedia connorsi</i> Cooper and Grant.....	VR	<i>Hustedia lusca</i> Cooper and Grant.....	A
<i>Hustedia lusca</i> Cooper and Grant.....	C	<i>Hustedia spicata</i> Cooper and Grant.....	C
<i>Hustedia spicata</i> Cooper and Grant.....	C	<i>Institella leonardensis</i> (R.E. King).....	C
<i>Lepidocrania</i> sp. ....	VR	<i>Kochiproductus</i> sp. 6 .....	VR
<i>Lepidospirifer angulatus</i> Cooper and Grant.....	C	<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	VR
<i>Martinia miranda</i> Cooper and Grant.....	VR	<i>Lepidospirifer angulatus</i> Cooper and Grant.....	R
<i>Meekella calathica</i> Cooper and Grant.....	C	<i>Lepidospirifer costellus</i> (R.E. King).....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR	<i>Lepidospirifer demissus</i> Cooper and Grant.....	VR
<i>Metriolepis tegulata</i> Cooper and Grant.....	VR	<i>Loxophragmus ellipticus</i> Cooper and Grant.....	R
<i>Neophricadothyris bullata</i> Cooper and Grant.....	VR	<i>Martinia miranda</i> Cooper and Grant.....	R
<i>Nudauris linospina</i> Cooper and Grant.....	VR	<i>Meekella calathica</i> Cooper and Grant.....	A
<i>Peniculauris subcostata</i> (R.E. King).....	R	<i>Meekella</i> sp. ....	VR
<i>Pontisia stehlii tumidosa</i> Cooper and Grant.....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R
<i>Pseudoleptodus</i> sp. 5 .....	VR	<i>Metriolepis carotica</i> Cooper and Grant.....	C
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	C	<i>Metriolepis tegulata</i> Cooper and Grant.....	R
<i>Rhipidomella hispidula</i> Cooper and Grant.....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant.....	VR
<i>Rugatia occidentalis parvauris</i> (Newberry) .....	VR	<i>Neospirifer mansuetus</i> Cooper and Grant.....	R
<i>Rugatia paraindica</i> (McKee).....	R	<i>Niviconia globosa</i> (R.E. King).....	A
<i>Spiriferellina tricola</i> Cooper and Grant.....	VR	<i>Nudauris linospina</i> Cooper and Grant.....	R
<i>Stenoscisma</i> sp. ....	VR	<i>Peniculauris subcostata</i> (R.E. King).....	C
<i>Texarina wordensis</i> (R.E. King) .....	VR	<i>Petasmaia expansa</i> Cooper and Grant.....	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	C	<i>Pontisia stehlii tumidosa</i> Cooper and Grant.....	VR
LOCALITY N703b : Cathedral Mountain Formation		<i>Pseudoleptodus</i> sp. ....	VR
<i>Acosarina mesoplatys</i> (R.E. King).....	C	<i>Rallacosta xystica</i> Cooper and Grant.....	R
<i>Agelesia triangularis</i> (R.E. King) .....	R	<i>Reticulariina venustula</i> Cooper and Grant.....	VR
<i>Anemonaria sublaevis</i> (R.E. King) .....	R	<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	R
<i>Anteridocus gongylus</i> Cooper and Grant.....	VR	<i>Rhipidomella hispidula</i> Cooper and Grant.....	R
<i>Antronaria speciosa</i> Cooper and Grant.....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant.....	VR
<i>Cartorhium latum</i> (R.E. King).....	R	<i>Rugatia paraindica</i> (McKee) .....	R
<i>Cenorhynchia parvula</i> Cooper and Grant.....	VR	<i>Spiriferellina tricola</i> Cooper and Grant.....	R
<i>Chaeniorhynchus transversum</i> Cooper and Grant.....	VR	<i>Stenoscisma aptatum</i> Cooper and Grant.....	VR
<i>Choanodus irregularis</i> Cooper and Grant.....	C	<i>Stenoscisma doricranum</i> Cooper and Grant.....	VR
<i>Choanodus perfectus</i> Cooper and Grant.....	VR	<i>Stenoscisma exutum</i> Cooper and Grant.....	R
<i>Chonosteges costellatus</i> Cooper and Grant.....	VR	<i>Stenoscisma triquetrum</i> Cooper and Grant.....	C
<i>Chonosteges variabilis</i> Cooper and Grant.....	R	<i>Tautosia fastigiata</i> Cooper and Grant.....	VR
<i>Collemataria gregaria</i> Cooper and Grant.....	A	<i>Texarina wordensis</i> (R.E. King) .....	VR
<i>Collemataria irregularis</i> Cooper and Grant.....	VR	<i>Thamnusia anterospinosa</i> Cooper and Grant.....	VR
<i>Composita bucculenta</i> Cooper and Grant.....	VR	<i>Thedusia bucrenata</i> Cooper and Grant.....	VR
<i>Composita imbricata</i> Cooper and Grant.....	C	<i>Torynechus caelatus</i> Cooper and Grant.....	R
<i>Composita</i> sp. ....	R	<i>Trophisina fenaria</i> Cooper and Grant.....	C
<i>Compressoproductus curtus</i> Cooper and Grant.....	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	A
<i>Compressoproductus thomasi</i> Cooper and Grant.....	VR	LOCALITY N703bs : Cathedral Mountain Formation	
<i>Cyclacantharia paucispinosa</i> Cooper and Grant.....	VR	<i>Acosarina mesoplatys</i> (R.E. King).....	C
<i>Derbyia complicata</i> Cooper and Grant.....	R	<i>Agelesia triangularis</i> (R.E. King) .....	VA
<i>Derbyia informis</i> Cooper and Grant.....	R	<i>Anteridocus gongylus</i> Cooper and Grant.....	VR
<i>Derbyia laqueata</i> Cooper and Grant.....	C	<i>Cancrinella</i> sp. 1 .....	VR
<i>Derbyia</i> sp. ....	R	<i>Cartorhium latum</i> (R.E. King) .....	R
<i>Dielasma ellipsoideum</i> Cooper and Grant.....	VR	<i>Cenorhynchia parvula</i> Cooper and Grant.....	VR
<i>Dielasma obesum</i> Cooper and Grant.....	VR	<i>Choanodus irregularis</i> Cooper and Grant.....	VR
<i>Dielasma</i> sp. ....	VR	<i>Chondronia bella</i> Cooper and Grant.....	R
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant.....	C	<i>Chonosteges multicostatus</i> Cooper and Grant.....	C
<i>Echinauris irregularis</i> Cooper and Grant.....	A	<i>Composita imbricata</i> Cooper and Grant.....	R
<i>Echinauris</i> sp. ....	R	<i>Composita</i> sp. ....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	C	<i>Compressoproductus curtus</i> Cooper and Grant.....	VR
<i>Entelestes leonardensis</i> R.E. King .....	VR	<i>Compressoproductus thomasi</i> Cooper and Grant.....	VR
<i>Eolyttonia circularis</i> Cooper and Grant.....	C	<i>Derbyia informis</i> Cooper and Grant.....	VR
<i>Eolyttonia pocillata</i> Cooper and Grant.....	R	<i>Derbyia laqueata</i> Cooper and Grant.....	R
<i>Goniarina</i> sp. 2 .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	C
<i>Grandaurispina? vaga</i> Cooper and Grant.....	VR	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant.....	VR
<i>Hercosia uddeni</i> (Böse) .....	C	<i>Echinauris irregularis</i> Cooper and Grant.....	C
		<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	VR
		<i>Entelestes plummeri</i> R.E. King .....	C

	Rarity code		Rarity code
LOCALITY N703bs - Continued			
<i>Eolyttonia circularis</i> Cooper and Grant .....	VR	<i>Metriolepis tegulata</i> Cooper and Grant .....	C
<i>Eolyttonia pocillata</i> Cooper and Grant .....	VR	<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	R
<i>Goniarina futilis</i> Cooper and Grant .....	VR	<i>Neospirifer bakeri bakeri</i> R.E. King .....	R
<i>Hercosia uddeni</i> (Böse) .....	C	<i>Niviconia globosa</i> (R.E. King) .....	VR
<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR	<i>Paucispinifera</i> sp. ....	VR
<i>Hustedia lusca</i> Cooper and Grant .....	A	<i>Paucispinifera sulcata</i> Cooper and Grant .....	R
<i>Hustedia spicata</i> Cooper and Grant .....	R	<i>Peniculauris costata</i> Cooper and Grant .....	VR
<i>Institella leonardensis</i> (R.E. King) .....	C	<i>Petasmatherus pumilus</i> Cooper and Grant .....	VR
<i>Linoproductus delicatus</i> Cooper and Grant .....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR
<i>Loxophragmus ellipticus</i> Cooper and Grant .....	R	<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	A	<i>Pseudodielasma</i> sp. ....	VR
<i>Metriolepis carotica</i> Cooper and Grant .....	C	<i>Ptygmactrum extensum</i> Cooper and Grant .....	VR
<i>Metriolepis larina</i> Cooper and Grant .....	VR	<i>Reticulariina pristina</i> Cooper and Grant .....	VR
<i>Metriolepis tegulata</i> Cooper and Grant .....	R	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	R	<i>Rhamnaria vinnula</i> Cooper and Grant .....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	R	<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Rugatia incurvata</i> (R.E. King) .....	VR
<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	VR	<i>Rugatia mckeei</i> Cooper and Grant .....	VR
<i>Ptygmactrum angulatum</i> Cooper and Grant .....	VR	<i>Spiriferellina tricola</i> Cooper and Grant .....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	<i>Stenosisma calvatum</i> Cooper and Grant .....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	A	<i>Texarina wordensis</i> (R.E. King) .....	VR
<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR	<i>Thedusia mesocostata</i> Cooper and Grant .....	C
<i>Stenosisma aptatum</i> Cooper and Grant .....	VR	<i>Waagenoconcha convexa</i> Cooper and Grant .....	C
<i>Texarina wordensis</i> (R.E. King) .....	VR	<i>Xenosteges magnus</i> Cooper and Grant .....	VR
<i>Thedusia bucrenata</i> Cooper and Grant .....	VR	<i>Yakovlevia immatura</i> Cooper and Grant .....	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	R	LOCALITY N703d : Road Canyon Formation	
LOCALITY N703c : Road Canyon Formation		<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Acosarina mesoplatys</i> (R.E. King) .....	A	<i>Allorhynchus</i> sp. ....	VR
<i>Anemonaria sublaevis</i> (R.E. King) .....	R	<i>Ametoria residua</i> Cooper and Grant .....	R
<i>Bothrostegium compactum</i> Cooper and Grant .....	C	<i>Cartorhium</i> sp. ....	VR
<i>Collemataria</i> sp. ....	R	<i>Cenorhynchia saginata</i> Cooper and Grant .....	VR
<i>Composita crassa</i> Cooper and Grant .....	R	<i>Composita crassa</i> Cooper and Grant .....	C
<i>Crurithyris minutalis</i> Cooper and Grant .....	R	<i>Composita</i> sp. ....	VR
<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	C	<i>Crurithyris minutalis</i> Cooper and Grant .....	VR
<i>Derbyia cincinnata</i> Cooper and Grant .....	R	<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	VR
<i>Derbyia complicata</i> Cooper and Grant .....	R	<i>Derbyia cincinnata</i> Cooper and Grant .....	VR
<i>Derbyia informis</i> Cooper and Grant .....	VR	<i>Derbyia complicata</i> Cooper and Grant .....	C
<i>Derbyia laqueata</i> Cooper and Grant .....	R	<i>Derbyia filosa</i> Cooper and Grant .....	VR
<i>Dielasma expansum</i> Cooper and Grant .....	VR	<i>Derbyia informis</i> Cooper and Grant .....	VR
<i>Dyros (Dyros) angulatus</i> Cooper and Grant .....	R	<i>Derbyia laqueata</i> Cooper and Grant .....	VR
<i>Dyros (Dyros) extensus</i> Cooper and Grant .....	R	<i>Derbyia</i> sp. 2 .....	VR
<i>Dyros (Dyros) transversus</i> Cooper and Grant .....	C	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR
<i>Dyros (Tetragonetes) rectangulatus</i> Cooper and Grant .....	C	<i>Dyros (Dyros) angulatus</i> Cooper and Grant .....	C
<i>Dyros (Tetragonetes) solidus</i> Cooper and Grant .....	C	<i>Dyros (Dyros) extensus</i> Cooper and Grant .....	VR
<i>Echinauris bella</i> Cooper and Grant .....	VR	<i>Dyros (Dyros) transversus</i> Cooper and Grant .....	C
<i>Echinauris irregularis</i> Cooper and Grant .....	R	<i>Dyros (Lissosia) parvus</i> Cooper and Grant .....	R
<i>Echinauris liumbona</i> Cooper and Grant .....	C	<i>Dyros (Tetragonetes) solidus</i> Cooper and Grant .....	A
<i>Echinauris parva</i> Cooper and Grant .....	R	<i>Dyros (Tetragonetes) strigosus</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	C	<i>Echinauris bella</i> Cooper and Grant .....	R
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R	<i>Echinauris irregularis</i> Cooper and Grant .....	R
<i>Glossothyropsis superba</i> Cooper and Grant .....	VR	<i>Echinauris lappacea</i> Cooper and Grant .....	C
<i>Grandaurispina</i> sp. 1 .....	VR	<i>Echinauris liumbona</i> Cooper and Grant .....	C
<i>Hercosestria cribrata</i> Cooper and Grant .....	C	<i>Echinauris</i> sp. ....	VR
<i>Heteralosia hystricula</i> (Girty) .....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R
<i>Holotricharina hirsuta</i> Cooper and Grant .....	R	<i>Eolyttonia chaotica</i> Cooper and Grant .....	R
<i>Horridonia texana</i> R.E. King .....	VR	<i>Glossothyropsis superba</i> Cooper and Grant .....	VR
<i>Hustedia ampullacea</i> Cooper and Grant .....	VR	<i>Heterelasma glansfagea</i> Cooper and Grant .....	R
<i>Hustedia connorsii</i> Cooper and Grant .....	C	<i>Holotricharina hirsuta</i> Cooper and Grant .....	R
<i>Hustedia consuta</i> Cooper and Grant .....	C	<i>Hustedia consuta</i> Cooper and Grant .....	A
<i>Hustedia cuneata</i> Cooper and Grant .....	R	<i>Hustedia cuneata</i> Cooper and Grant .....	R
<i>Kutorginella sullivanensis</i> (R.E. King) .....	VR	<i>Hustedia</i> sp. ....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	R
<i>Meekella calathica</i> Cooper and Grant .....	A	<i>Meekella calathica</i> Cooper and Grant .....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	C		

	Rarity code		Rarity code
LOCALITY N703d - Continued			
<i>Meekella</i> sp. ....	VR	<i>Gypospirifer anancites</i> Cooper and Grant .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VA	<i>Hystriculina sulcata</i> Cooper and Grant .....	VR
<i>Metriolepis tegulata</i> Cooper and Grant .....	VR	<i>Orthotetella wolfcampensis</i> R.E. King .....	VR
<i>Neophricadothyris cordata</i> Cooper and Grant .....	A	<i>Parenteleles cooperi</i> R.E. King .....	VR
<i>Neospirifer bakeri columbarius</i> Cooper and Grant .....	A	<i>Teguliferina boesei</i> R.E. King .....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant .....	VR	LOCALITY N703x : Gaptank Formation, Uddenites	
<i>Peniculaurils costata</i> Cooper and Grant .....	R	Member	
<i>Petasmatherus nitidus</i> Cooper and Grant .....	VR	<i>Limbella wolfcampensis</i> (R.E. King) .....	VR
<i>Petasmatherus</i> cf. <i>opulus</i> Cooper and Grant .....	VR	<i>Meekella prionota</i> Cooper and Grant .....	VR
<i>Petasmatherus pumilus</i> Cooper and Grant .....	VR	<i>Scacchinella triangulata</i> Cooper and Grant .....	VR
<i>Phrenophoria?</i> <i>nudumbona</i> Cooper and Grant .....	VR	<i>Teguliferina boesei</i> R.E. King .....	VR
<i>Phrenophoria pentagonalis</i> Cooper and Grant .....	VR	LOCALITY N703y : Skinner Ranch Formation, Poplar	
<i>Phrenophoria ventricosa</i> Cooper and Grant .....	R	Tank Member	
<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR	<i>Nudauris enigmatica</i> Cooper and Grant .....	VR
<i>Ptygmactrum extensum</i> Cooper and Grant .....	R	LOCALITY N704 : Word Formation, Appel Ranch	
<i>Reticulariina pristina</i> Cooper and Grant .....	C	Member	
<i>Rhamnaria rectangulata</i> Cooper and Grant .....	VR	<i>Arionthia germana</i> Cooper and Grant .....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	R	<i>Composita enormis</i> Cooper and Grant .....	R
<i>Rhynchopora hebetata</i> Cooper and Grant .....	R	<i>Costispinifera costata</i> (R.E. King) .....	VR
<i>Rugatia incurvata</i> (R.E. King) .....	VR	<i>Cyclacantharia kingorum</i> Cooper and Grant .....	R
<i>Rugatia mckeei</i> Cooper and Grant .....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	VR
<i>Spinarella costellata</i> Cooper and Grant .....	VR	<i>Derbyia texta</i> Cooper and Grant .....	VR
<i>Spiriferellina tricola</i> Cooper and Grant .....	VR	<i>Dielasma compactum</i> Cooper and Grant .....	VR
<i>Stenosisma camurum</i> Cooper and Grant .....	R	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	R
<i>Thedusia mesocostata</i> Cooper and Grant .....	C	<i>Dyoros (Tetragonetes) quadrangulatus</i> Cooper and Grant ..	VR
<i>Waagenoconcha convexa</i> Cooper and Grant .....	R	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR
<i>Yakovlevia immatura</i> Cooper and Grant .....	R	<i>Eolyttonia progressa</i> Cooper and Grant .....	VR
LOCALITY N703e : Word Formation, China Tank		<i>Heteralosia hystricula</i> (Girty) .....	R
Member		<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	VR
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	VR	<i>Liosotella irregularis</i> Cooper and Grant .....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR	<i>Liosotella wordensis</i> (R.E. King) .....	VR
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR	<i>Meekella skenoides</i> Girty .....	VR
<i>Heteralosia hystricula</i> (Girty) .....	VR	<i>Paraspiriferina rotundata</i> Cooper and Grant .....	VR
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR	<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	VR
<i>Liosotella wordensis</i> (R.E. King) .....	VR	<i>Petasmatherus opulus</i> Cooper and Grant .....	VR
<i>Phrenophoria subcarinata</i> Cooper and Grant .....	VR	<i>Phrenophoria subcarinata</i> Cooper and Grant .....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	R
<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	VR	<i>Stenosisma renode</i> Cooper and Grant .....	VR
LOCALITY N703-l : Gaptank Formation, Uddenites		<i>Waagenoconcha magnifica</i> Cooper and Grant .....	VR
Member		LOCALITY N704d : Gaptank Formation	
<i>Antiquatonia inflativentra</i> Cooper and Grant .....	VR	<i>Reticulatia huecoensis</i> (R.E. King) .....	VR
<i>Composita</i> sp. ....	R	LOCALITY N704f : Lenox Hills Formation	
<i>Derbyia</i> sp. ....	VR	<i>Hystriculina sulcata</i> Cooper and Grant .....	VR
<i>Echinaria</i> cf. <i>moorei</i> (Dunbar and Condra) .....	VR	LOCALITY N704q : Lenox Hills Formation	
<i>Hystriculina</i> sp. ....	VR	<i>Limbella wolfcampensis</i> (R.E. King) .....	VR
<i>Juresania</i> sp. 1 .....	VR	LOCALITY N704r : Lenox Hills Formation	
<i>Kutorginella uddeni</i> Cooper and Grant .....	VR	<i>Dasysaria wolfcampensis</i> (R.E. King) .....	VR
<i>Linoproductus</i> sp. ....	VR	<i>Hystriculina sulcata?</i> Cooper and Grant .....	VR
<i>Meekella texana</i> R.E. King .....	VR	<i>Kochiproductus primitivus</i> Cooper and Grant .....	VR
<i>Neospirifer apothescelus</i> Cooper and Grant .....	VR	<i>Linoproductus</i> sp. ....	VR
LOCALITY N703o : Gaptank Formation, Uddenites		LOCALITY N704y : Skinner Ranch Formation, Sullivan	
Member		Peak Member	
<i>Echinaria</i> cf. <i>moorei</i> (Dunbar and Condra) .....	VR	<i>Geyerella hessi</i> Cooper and Grant .....	VR
<i>Echinauris subquadrata</i> Cooper and Grant .....	VR	LOCALITY N704z : Cathedral Mountain Formation	
<i>Eridmatus marathonensis</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Meekella texana</i> R.E. King .....	VR	LOCALITY N705 : Lenox Hills Formation	
<i>Scacchinella triangulata</i> Cooper and Grant .....	R	<i>Composita discina</i> Cooper and Grant .....	VR
LOCALITY N703p : Gaptank Formation, Uddenites		<i>Composita</i> sp. ....	VR
Member		<i>Derbyia profunda</i> Cooper and Grant .....	VR
<i>Chonetinella costellata</i> Cooper and Grant .....	VR		
<i>Enteleles wolfcampensis</i> R.E. King .....	VR		

	Rarity code		Rarity code
LOCALITY N705 - Continued			
<i>Echinauris subquadrata</i> Cooper and Grant	VR	<i>Reticulariina tetrica</i> Cooper and Grant	C
<i>Enteleles wolfcampensis</i> R.E. King	VR	<i>Rhamnaria grandis</i> Cooper and Grant	VR
<i>Geyerella kingorum</i> Cooper and Grant	R	<i>Rhipidomella hessensis</i> R.E. King	A
<i>Kochiproductus</i> sp.	VR	<i>Scacchinella titan</i> Cooper and Grant	A
<i>Limbella wolfcampensis</i> (R.E. King)	R	? <i>Stenoscisma doricranum</i> Cooper and Grant	VR
<i>Meekella magnifica</i> Cooper and Grant	R	<i>Stenoscisma myioides</i> Cooper and Grant	C
<i>Meekella prionota</i> Cooper and Grant	VR	<i>Stenoscisma pyraustoides</i> Cooper and Grant	C
<i>Nudauris convexa</i> Cooper and Grant	VR	<i>Teguliferina conida</i> (Stehli)	C
<i>Parenteleles superbus</i> Cooper and Grant	C	<i>Tricoria hirpex</i> Cooper and Grant	A
<i>Rhynchopora molina</i> Cooper and Grant	VR	LOCALITY N705b : Skinner Ranch Formation	
<i>Spyridiophora</i> sp. 2	VR	<i>Altiplecus glebosus</i> Cooper and Grant	VR
<i>Striatifera linoproductiformis</i> Cooper and Grant	VR	<i>Antiquatonia hessensis</i> (R.E. King)	VR
<i>Teguliferina boesei</i> R.E. King	VR	<i>Composita apheles</i> Cooper and Grant	VR
<i>Tropidelasma strobilum</i> Cooper and Grant	R	<i>Derbyia</i> sp.	VR
LOCALITY N705a : Skinner Ranch Formation		<i>Enteleles rotundobesus</i> Cooper and Grant	VR
<i>Acanthocrania</i> sp.	VR	<i>Eolyttonia gigantea</i> Cooper and Grant	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant	C	<i>Orthotichia newelli</i> Cooper and Grant	VR
<i>Acritosia teguliferoides</i> (R.E. King)	C	<i>Scacchinella titan</i> Cooper and Grant	VR
<i>Altiplecus glebosus</i> Cooper and Grant	A	<i>Stenoscisma pyraustoides</i> Cooper and Grant	VR
<i>Anomalesia perplexa</i> Cooper and Grant	VR	LOCALITY N705ca : Gaptank Formation	
<i>Antiquatonia hessensis</i> (R.E. King)	VR	<i>Chonetinella costellata</i> Cooper and Grant	R
<i>Antronaria dissona</i> Cooper and Grant	A	<i>Chonetinella parva</i> Cooper and Grant	VR
<i>Antronaria titania</i> Cooper and Grant	R	<i>Chonetinella</i> sp.	VR
<i>Chonetinella biplicata</i> (R.E. King)	C	<i>Eridmatius marathonsensis</i> Cooper and Grant	VR
<i>Cleiothyridina mulsa</i> Cooper and Grant	C	<i>Hustedia</i> sp.	VR
<i>Collemataria platys</i> Cooper and Grant	C	<i>Rhipidomella</i> sp.	R
<i>Composita apheles</i> Cooper and Grant	VA	LOCALITY N705f : Gaptank Formation	
<i>Cooperina</i> sp.	VR	<i>Composita</i> sp.	VR
<i>Crenispirifer angulatus</i> (R.E. King)	A	LOCALITY N705h : Gaptank Formation, Uddenites Member	
<i>Crurithyris</i> sp.	VR	<i>Echinauris subquadrata</i> Cooper and Grant	VR
<i>Derbyia crenulata</i> Girty	C	<i>Hystriculina sulcata</i> Cooper and Grant	VR
<i>Derbyia nasuta</i> Girty	C	<i>Linoproductus</i> sp.	VR
<i>Derbyia</i> sp.	VR	<i>Neospirifer apothescelus</i> Cooper and Grant	VR
<i>Dielasma</i> sp. 1	R	<i>Nudauris splendens</i> Cooper and Grant	R
<i>Dielasma</i> sp. 2	R	LOCALITY N705i : Gaptank Formation	
<i>Diplanus lamellatus</i> (R.E. King)	C	<i>Kutorginella</i> sp.	VR
<i>Diplanus rarus</i> Cooper and Grant	R	LOCALITY N705k : Lenox Hills Formation	
<i>Elliottella varicostata</i> Cooper and Grant	A	<i>Composita discina</i> Cooper and Grant	R
<i>Enteleles stehlii</i> Cooper and Grant	C	<i>Derbyia</i> sp.	VR
<i>Fimbrinia ovata</i> Cooper and Grant	R	<i>Echinauris</i> sp.	VR
<i>Geyerella hessi</i> Cooper and Grant	VR	<i>Enteleles wolfcampensis</i> R.E. King	R
<i>Goniarina magniextensa</i> Cooper and Grant	VR	<i>Eolyttonia fredericksi</i> (R.E. King)	VR
<i>Gypospirifer infraplicus</i> (R.E. King)	R	<i>Hustedia trita trita</i> Cooper and Grant	VR
<i>Heteralosia</i> sp.	VR	<i>Hystriculina</i> sp.	VR
<i>Hustedia catella</i> Cooper and Grant	C	<i>Limbella wolfcampensis</i> (R.E. King)	C
<i>Hustedia hessensis</i> R.E. King	C	<i>Meekella prionota</i> Cooper and Grant	VR
<i>Hustedia</i> sp.	R	<i>Orthotichia kozlowskii</i> R.E. King	VR
<i>Isogramma</i> sp.	VR	<i>Parenteleles superbus</i> Cooper and Grant	R
<i>Kozlowskia alata</i> Cooper and Grant	A	? <i>Rhipidomella miscella</i> Cooper and Grant	VR
<i>Kozlowskia subsphaeroidalis</i> Cooper and Grant	VR	<i>Scacchinella exasperata</i> Cooper and Grant	C
<i>Leurosina vulgarica</i> Cooper and Grant	C	? <i>Stenoscisma problematicum</i> Cooper and Grant	VR
<i>Limbella limbata</i> Cooper and Grant	VR	<i>Teguliferina boesei</i> R.E. King	VR
<i>Linoproductus angustus</i> R.E. King	VR	<i>Tropidelasma strobilum</i> Cooper and Grant	A
<i>Martinia</i> sp. 2	VR	LOCALITY N705-l : Skinner Ranch Formation	
<i>Meekella caperata</i> Cooper and Grant	C	<i>Scacchinella titan</i> Cooper and Grant	VR
<i>Meekella enormis</i> Cooper and Grant	C	LOCALITY N705m : Lenox Hills Formation	
<i>Meekella hessensis</i> R.E. King	R	<i>Acritosia peculiaris</i> Cooper and Grant	VR
<i>Metriolepis scrupea</i> Cooper and Grant	C	<i>Cancrinella</i> sp.	VR
<i>Neophricadothyris catatona</i> Cooper and Grant	C	<i>Composita strongyle</i> Cooper and Grant	VR
<i>Nudauris enigmatica</i> Cooper and Grant	R		
<i>Orthotichia newelli</i> Cooper and Grant	C		
<i>Poikilosakos informis</i> Cooper and Grant	VR		
<i>Pontisia costata</i> Cooper and Grant	C		



	Rarity code		Rarity code
LOCALITY N705m - Continued		LOCALITY N705v : Gaptank Formation	
<i>Enteleles wolfcampensis</i> R.E. King.....	VR	<i>Composita</i> sp. ....	VR
<i>Eolyttonia fredericki</i> (R.E. King) .....	VR	<i>Linoproductus</i> sp. ....	VR
<i>Geyerella</i> sp. 1 .....	VR	<i>Nudauris splendens</i> Cooper and Grant.....	VR
<i>Limbella wolfcampensis</i> (R.E. King) .....	R	LOCALITY N706 : Word Formation, Willis Ranch	
<i>Orthotichia kozlowskii</i> R.E. King.....	VR	Member	
<i>Pontisia kingi</i> Cooper and Grant.....	VR	<i>Acanthocrania intermedia</i> Cooper and Grant.....	C
<i>Scacchinella exasperata</i> Cooper and Grant .....	C	<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	A
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Allorhynchus</i> sp. ....	VR
<i>Tropidlasma strobilum</i> Cooper and Grant .....	VR	<i>Allorhynchus triangulatum</i> Cooper and Grant .....	R
LOCALITY N705n : Skinner Ranch Formation		<i>Allorhynchus variabile</i> Cooper and Grant .....	VR
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	<i>Arionthia blothrhachis</i> Cooper and Grant .....	VR
<i>Antronaria voluminosa</i> Cooper and Grant .....	VR	<i>Bothrionia nasuta</i> Cooper and Grant .....	R
<i>Beecheria</i> sp. ....	VR	<i>Cactosteges anomalus</i> Cooper and Grant .....	A
<i>Elliottella varicostata</i> Cooper and Grant .....	VR	<i>Cancrinella subquadrata</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR	<i>Cartorhium chelomatum</i> Cooper and Grant.....	C
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Cartorhium vidriense</i> Cooper and Grant.....	VR
<i>Linoproductus</i> sp. ....	VR	<i>Cenorhynchia triangulata</i> Cooper and Grant .....	VR
<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR	<i>Collemataria elongata</i> Cooper and Grant.....	VA
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Composita enormis</i> Cooper and Grant .....	A
LOCALITY N705o : Skinner Ranch Formation		<i>Composita parasulcata</i> Cooper and Grant.....	A
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	A
<i>Acritosia teguliferoides</i> (R.E. King) .....	VR	<i>Costispinifera costata</i> (R.E. King) .....	VA
<i>Chonosteges limbatus</i> Cooper and Grant .....	VR	<i>Crurithyris tholiaphor</i> Cooper and Grant .....	C
<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR	<i>Cyclacantharia kingorum</i> Cooper and Grant.....	VA
<i>Hustedia</i> sp. ....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	A
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Derbyia pannucia</i> Cooper and Grant .....	A
<i>Meekella hessensis</i> R.E. King.....	VR	<i>Dielasma adamanteum</i> Cooper and Grant .....	C
<i>Oncosarina spinicostata</i> Cooper and Grant .....	VR	<i>Dielasma compactum</i> Cooper and Grant .....	A
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Dielasma planidorsatum</i> Cooper and Grant .....	VR
LOCALITY N705q : Gaptank Formation		<i>Dielasma zebratum</i> Cooper and Grant.....	C
<i>Limbella costellata</i> Cooper and Grant.....	VR	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	VA
<i>Meekella texana</i> R.E. King .....	VR	<i>Dyoros (Dyoros) tenuis</i> Cooper and Grant .....	A
<i>Tropidlasma strobilum</i> Cooper and Grant .....	VR	<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	A
LOCALITY N705r : Skinner Ranch Formation		<i>Dyoros (Tetragonetes) wordensis</i> Cooper and Grant.....	R
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	C
<i>Antronaria transversa</i> (R.E. King) .....	VR	<i>Echinosteges tuberculatus</i> (R.E. King) .....	C
<i>Chonosteges variabilis</i> Cooper and Grant.....	R	<i>Ectoposia wildei</i> Cooper and Grant.....	VR
<i>Derbyia crenulata</i> Girty .....	VR	<i>Enteleles wordensis</i> R.E. King .....	VA
<i>Diplanus lamellatus</i> (R.E. King) .....	R	<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	R
<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR	<i>Grandaurispina bella</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	VR	<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	C
<i>Limbella</i> sp. 1 .....	VR	<i>Heteralosia hystricula</i> (Girty) .....	A
<i>Meekella hessensis</i> R.E. King.....	VR	<i>Heterelasma concavum</i> Cooper and Grant .....	C
<i>Neophricadothyris</i> sp. ....	VR	<i>Heterelasma pentagonum</i> Cooper and Grant .....	R
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Heterelasma solidum</i> Cooper and Grant .....	C
<i>Spyridiophora reticulata</i> (R.E. King) .....	R	<i>Heterelasma</i> sp. ....	VR
<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR	<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR
<i>Teguliferina compacta</i> Cooper and Grant .....	R	<i>Hustedia pugilla pugilla</i> Cooper and Grant .....	VA
<i>Tropidlasma costellatum</i> Cooper and Grant .....	VR	<i>Hustedia sculptilis</i> Cooper and Grant.....	R
<i>Tropidlasma</i> sp. 5 .....	VR	<i>Hustedia</i> sp. ....	VR
LOCALITY N705s : Lenox Hills Formation		<i>Leiorhynchoidea amygdaloidea</i> Cooper and Grant .....	C
<i>Composita strongyle</i> Cooper and Grant .....	R	<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	R
<i>Enteleles wolfcampensis</i> R.E. King.....	VR	<i>Leurosina lata</i> Cooper and Grant .....	C
<i>Limbella wolfcampensis</i> (R.E. King) .....	R	<i>Liosotella parva</i> Cooper and Grant .....	VR
<i>Meekella magnifica</i> Cooper and Grant.....	VR	<i>Liosotella wordensis</i> (R.E. King) .....	A
<i>Orthotichia kozlowskii</i> R.E. King.....	VR	<i>Meekella skenoides</i> Girty .....	VA
<i>Parenteleles superbus</i> Cooper and Grant.....	VR	<i>Megousia definita</i> Cooper and Grant .....	VR
<i>Pontisia kingi</i> Cooper and Grant.....	VR	<i>Megousia flexuosa</i> Cooper and Grant .....	C
<i>Scacchinella exasperata</i> Cooper and Grant .....	C	<i>Megousia mucronata</i> Cooper and Grant .....	R
<i>Teguliferina boesei</i> R.E. King .....	R	<i>Metriolepis pulvinata</i> Cooper and Grant .....	C
<i>Tropidlasma strobilum</i> Cooper and Grant .....	R	<i>Neochonetes</i> sp. ....	R
		<i>Neophricadothyris conara</i> Cooper and Grant .....	VR
		<i>Neospirifer amphigyus</i> Cooper and Grant .....	C
		<i>Notothyris venusta</i> Cooper and Grant .....	VR



	Rarity code		Rarity code
LOCALITY N706 - Continued			
<i>Paraspiriferina laqueata</i> Cooper and Grant.....	A	<i>Crurithyris tholiaphor</i> Cooper and Grant.....	C
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	C	<i>Ctenalosia fixata</i> Cooper and Stehli.....	VR
<i>Paucispinifera intermedia</i> Cooper and Grant.....	R	<i>Cyclacantharia kingorum</i> Cooper and Grant.....	VA
<i>Paucispinifera quadrata</i> Cooper and Grant.....	R	<i>Cyclacantharia kingorum agaricoidea</i> Cooper and Grant....	VR
<i>Paucispinifera</i> sp. ....	VR	<i>Derbyia filosa</i> Cooper and Grant.....	A
<i>Paucispinifera transversa</i> Cooper and Grant.....	C	<i>Derbyia pannucia</i> Cooper and Grant.....	A
<i>Petasmatherus opulus</i> Cooper and Grant.....	A	<i>Derbyia</i> sp. ....	VR
<i>Petrocrania teretis</i> Cooper and Grant.....	VR	<i>Derbyia texta</i> Cooper and Grant.....	C
<i>Phrenophoria subcarinata</i> Cooper and Grant.....	R	<i>Dielasma adamantum</i> Cooper and Grant.....	R
<i>Polymorpharia polymorpha</i> Cooper and Grant.....	VR	<i>Dielasma compactum</i> Cooper and Grant.....	R
<i>Pseudodielasma gibberum</i> Cooper and Grant.....	VA	<i>Dielasma gracile</i> Cooper and Grant.....	C
<i>Pseudodielasma minor</i> (R.E. King).....	A	<i>Dielasma</i> sp. ....	R
<i>Pseudodielasma ovatum</i> Cooper and Grant.....	A	<i>Dielasma zebratum</i> Cooper and Grant.....	VR
<i>Pseudodielasma pingue</i> Cooper and Grant.....	VR	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant.....	VA
<i>Pseudodielasma plicatum</i> Cooper and Grant.....	C	<i>Dyoros (Dyoros) planiextensus</i> Cooper and Grant.....	VA
<i>Pseudodielasma</i> sp. ....	SA	<i>Dyoros (Lissosia) concavus</i> Cooper and Grant.....	R
<i>Pseudodielasma sulcatum</i> Cooper and Grant.....	C	<i>Dyoros (Tetragonetes) wordensis</i> Cooper and Grant.....	VR
<i>Pseudoleptodus annosus</i> Cooper and Grant.....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper.....	VA
<i>Reticulariina cerina</i> Cooper and Grant.....	C	<i>Echinauris</i> sp. ....	R
<i>Reticulariina senticosa</i> Cooper and Grant.....	C	<i>Echinosteges tuberculatus</i> (R.E. King).....	C
<i>Reticulariina</i> sp. ....	R	<i>Ectoposia wildei</i> Cooper and Grant.....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper.....	A	<i>Eolyttonia progressa</i> Cooper and Grant.....	R
<i>Rhynchopora palumbula</i> Cooper and Grant.....	A	<i>Glossothyropsis rectangulata</i> Cooper and Grant.....	VR
<i>Spiriferella calcarata</i> Cooper and Grant.....	C	<i>Grandaurispina gibbosa</i> Cooper and Grant.....	A
<i>Spiriferellina hilli</i> (Girty).....	A	<i>Heteralosia hystricula</i> (Girty).....	VA
<i>Spiriferellina</i> sp. ....	VR	<i>Heterelasma concavum</i> Cooper and Grant.....	R
<i>Spiriferinaella scalpata</i> Cooper and Grant.....	VR	<i>Heterelasma pentagonum</i> Cooper and Grant.....	VR
<i>Stenosisma renode</i> Cooper and Grant.....	R	<i>Heterelasma solidum</i> Cooper and Grant.....	VR
<i>Tautosia transenna</i> Cooper and Grant.....	C	<i>Heterelasma</i> sp. ....	VR
<i>Texarina elongata</i> Cooper and Grant.....	VR	<i>Hustedia pugilla pluscula</i> Cooper and Grant.....	VA
<i>Texarina oblongata</i> Cooper and Grant.....	C	<i>Hustedia sculptilis</i> Cooper and Grant.....	VR
<i>Thedusia procera</i> Cooper and Grant.....	C	<i>Hustedia</i> sp. ....	R
<i>Tropidelasma anthicum</i> Cooper and Grant.....	R	<i>Leiorhynchoidea amygdaloidea</i> Cooper and Grant.....	VR
<i>Undulella undulata</i> Cooper and Grant.....	A	<i>Lepidocrania sublamellosa</i> Cooper and Grant.....	VR
<i>Waagenoconcha magnifica</i> Cooper and Grant.....	C	<i>Leurosina lata</i> Cooper and Grant.....	R
<i>Wellerella girtyi girtyi</i> Cooper and Grant.....	A	<i>Liosotella parva</i> Cooper and Grant.....	VR
<i>Xenosteges quadratus</i> Cooper and Grant.....	C	<i>Liosotella tetragonalis</i> Cooper and Grant.....	A
<i>Yakovlevia hessorum</i> Cooper and Grant.....	C	<i>Liosotella wordensis</i> (R.E. King).....	A
LOCALITY N706a : Word Formation, China Tank			
Member			
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	VR	<i>Meekella skenoides</i> Girty.....	A
<i>Dielasma planidorsatum</i> Cooper and Grant.....	VR	<i>Megousia definita</i> Cooper and Grant.....	VR
<i>Enteles wordensis</i> R.E. King.....	VR	<i>Metriolepis pulvinata</i> Cooper and Grant.....	R
<i>Heteralosia hystricula</i> (Girty).....	C	<i>Neophricadothyris conara</i> Cooper and Grant.....	C
<i>Hustedia pugilla nasiterna</i> Cooper and Grant.....	VR	<i>Neospirifer amphigyus</i> Cooper and Grant.....	VR
<i>Meekella skenoides</i> Girty.....	VR	<i>Notothyris venusta</i> Cooper and Grant.....	VR
<i>Megousia definita</i> Cooper and Grant.....	VR	<i>Paranorella</i> sp. 1.....	R
LOCALITY N706b : Word Formation, Lens			
<i>Allorhynchus permianum wordense</i> Cooper and Grant.....	R	<i>Paraspiriferina laqueata</i> Cooper and Grant.....	R
<i>Bothrionia nasuta</i> Cooper and Grant.....	C	<i>Paraspiriferina rotundata</i> Cooper and Grant.....	C
<i>Bothrionia transversa</i> Cooper and Grant.....	R	<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	C
<i>Cancrinella expansa</i> Cooper and Grant.....	VR	<i>Paucispinifera quadrata</i> Cooper and Grant.....	VA
<i>Cartorhium chelomatium</i> Cooper and Grant.....	C	<i>Paucispinifera</i> sp. ....	VR
<i>Cenorhynchia fracidia</i> Cooper and Grant.....	R	<i>Paucispinifera transversa</i> Cooper and Grant.....	VR
<i>Collemataria elongata</i> Cooper and Grant.....	A	<i>Petasmatherus opulus</i> Cooper and Grant.....	A
<i>Composita enormis</i> Cooper and Grant.....	A	<i>Petrocrania teretis</i> Cooper and Grant.....	VR
<i>Composita parasulcata</i> Cooper and Grant.....	A	<i>Phrenophoria subcarinata</i> Cooper and Grant.....	C
<i>Composita</i> sp. ....	R	<i>Pseudodielasma ovatum</i> Cooper and Grant.....	C
<i>Compressoproductus rarus</i> Cooper and Grant.....	VR	<i>Pseudodielasma</i> sp. ....	VR
<i>Compressoproductus</i> sp. 2.....	VR	<i>Ptygmactrum spiculatum</i> Cooper and Grant.....	VR
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud.....	C	<i>Reticulariina cerina</i> Cooper and Grant.....	A
<i>Costispinifera costata</i> (R.E. King).....	C	<i>Reticulariina</i> sp. 1.....	R
<i>Costispinifera rugatula</i> (Girty).....	VR	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper.....	VA
		<i>Rhynchopora palumbula</i> Cooper and Grant.....	C
		<i>Spiriferella gravis</i> Cooper and Grant.....	VA
		<i>Spiriferella levis</i> Cooper and Grant.....	C
		<i>Spiriferellina hilli</i> (Girty).....	C
		<i>Spiriferellina paucicostata</i> Cooper and Grant.....	VR

	Rarity code		Rarity code
LOCALITY N706b - Continued			
<i>Spiriferinaella scalpata</i> Cooper and Grant.....	R	<i>Meekella skenoides</i> Girty .....	VA
<i>Stenosisma renode</i> Cooper and Grant.....	VA	<i>Megousia definita</i> Cooper and Grant .....	VR
<i>Tautosia transenna</i> Cooper and Grant .....	C	<i>Megousia flexuosa</i> Cooper and Grant .....	VR
<i>Texarina elongata</i> Cooper and Grant .....	R	<i>Megousia mucronata</i> Cooper and Grant .....	A
<i>Thedusia procera</i> Cooper and Grant .....	C	<i>Metriolepis pulvinata</i> Cooper and Grant .....	R
<i>Tropidelasma anthicum</i> Cooper and Grant .....	R	<i>Neophricadothyris conara</i> Cooper and Grant .....	VR
<i>Undulella undulata</i> Cooper and Grant .....	R	<i>Neospirifer amphigyus</i> Cooper and Grant .....	A
<i>Waagenoconcha magnifica</i> Cooper and Grant.....	VR	<i>Notothyris venusta</i> Cooper and Grant .....	R
<i>Wellerella girtyi girtyi</i> Cooper and Grant.....	R	<i>Paranorella comptula</i> Cooper and Grant.....	R
<i>Xenosteges quadratus</i> Cooper and Grant .....	A	<i>Paraspiriferina laqueata</i> Cooper and Grant.....	A
LOCALITY N706c : Word Formation, China Tank		<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	C
Member		<i>Paucispinifera intermedia</i> Cooper and Grant .....	C
<i>Acanthocrania intermedia</i> Cooper and Grant.....	R	<i>Paucispinifera magnispina</i> Cooper and Grant .....	R
<i>Acolosia glabra</i> Cooper and Grant .....	R	<i>Paucispinifera transversa</i> Cooper and Grant .....	C
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	VR	<i>Petasmatherus opulus</i> Cooper and Grant .....	A
<i>Allorhynchus triangulatum</i> Cooper and Grant .....	C	<i>Phrenophoria subcarinata</i> Cooper and Grant .....	R
<i>Allorhynchus variabile</i> Cooper and Grant .....	C	<i>Pseudodielasma minor</i> (R.E. King).....	R
<i>Arionthia blothrhachis</i> Cooper and Grant .....	C	<i>Pseudodielasma</i> sp. ....	VR
<i>Bothrionia nasuta</i> Cooper and Grant.....	VR	<i>Pseudodielasma subcirculare</i> Cooper and Grant.....	VR
<i>Cactosteges anomalus</i> Cooper and Grant .....	C	<i>Ptygmactrum</i> sp. ....	VR
<i>Cancrinella planumbona</i> Cooper and Grant .....	VR	<i>Reticulariina cerina</i> Cooper and Grant .....	R
<i>Cartorhium chelomatium</i> Cooper and Grant.....	R	<i>Reticulariina senticosa</i> Cooper and Grant .....	C
<i>Cartorhium vidriense</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Cenorhynchia fracidia</i> Cooper and Grant.....	VR	<i>Rhamnaria kingorum delicata</i> Muir-Wood and Cooper .....	A
<i>Cenorhynchia pentagonalis</i> Cooper and Grant.....	R	<i>Rhynchopora palumbula</i> Cooper and Grant.....	C
<i>Collemataria elongata</i> Cooper and Grant.....	VA	<i>Spiriferella calcarata</i> Cooper and Grant.....	R
<i>Composita enormis</i> Cooper and Grant .....	A	<i>Spiriferella embrithes</i> Cooper and Grant.....	C
<i>Composita parasulcata</i> Cooper and Grant.....	A	<i>Spiriferellina hilli</i> (Girty).....	A
<i>Compressophructus rarus</i> Cooper and Grant.....	R	<i>Spiriferellina</i> sp. ....	R
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	C	<i>Spiriferinaella limata</i> Cooper and Grant .....	R
<i>Costispinifera rugatula</i> (Girty) .....	VA	<i>Stenosisma renode</i> Cooper and Grant.....	C
<i>Crenispinifer</i> sp. ....	VR	<i>Stenosisma repigratum</i> Cooper and Grant.....	VR
<i>Crurithyris tholiaphor</i> Cooper and Grant.....	A	<i>Stenosisma</i> sp. ....	VR
<i>Ctenalosia fixata</i> Cooper and Stehli .....	C	<i>Tautosia transenna</i> Cooper and Grant .....	R
<i>Ctenalosia</i> sp. ....	R	<i>Texarina elongata</i> Cooper and Grant .....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	VA	<i>Texarina oblongata</i> Cooper and Grant .....	R
<i>Derbyia filosa</i> Cooper and Grant .....	A	<i>Thamnosia</i> sp. ....	VR
<i>Derbyia pannucia</i> Cooper and Grant .....	A	<i>Thedusia procera</i> Cooper and Grant .....	C
<i>Derbyia texta</i> Cooper and Grant.....	C	<i>Tropidelasma anthicum</i> Cooper and Grant .....	VR
<i>Dielasma adamanteum angulatum</i> Cooper and Grant .....	VR	<i>Undulella undulata</i> Cooper and Grant .....	C
<i>Dielasma compactum</i> Cooper and Grant .....	C	<i>Waagenoconcha magnifica</i> Cooper and Grant.....	R
<i>Dielasma planidorsatum</i> Cooper and Grant .....	C	<i>Wellerella girtyi girtyi</i> Cooper and Grant.....	C
<i>Dielasma</i> sp. ....	R	<i>Xenosteges quadratus</i> Cooper and Grant .....	C
<i>Dielasma zebratum</i> Cooper and Grant.....	VR	<i>Yakovlevia intermedia</i> Cooper and Grant .....	R
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	A	LOCALITY N706d : Word Formation, Appel Ranch	
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant.....	A	Member	
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR	<i>Arionthia germana</i> Cooper and Grant.....	A
<i>Echinosteges tuberculatus</i> (R.E. King) .....	C	<i>Cartorhium orbiculatum</i> Cooper and Grant .....	C
<i>Ectoposia grandis</i> Cooper and Grant.....	VR	<i>Composita enormis</i> Cooper and Grant .....	C
<i>Entelestes wordensis</i> R.E. King .....	VA	<i>Composita parasulcata</i> Cooper and Grant.....	VR
<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	C	<i>Ctenalosia fixata</i> Cooper and Stehli .....	A
<i>Heteralosia hystricula</i> (Girty).....	A	<i>Ctenalosia</i> sp. ....	VR
<i>Heterelasma concavum</i> Cooper and Grant.....	VR	<i>Cyclacantharia kingorum</i> Cooper and Grant.....	C
<i>Heterelasma solidum</i> Cooper and Grant .....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	A
<i>Holosia</i> sp. 1 .....	VR	<i>Derbyia pannucia</i> Cooper and Grant .....	VR
<i>Hustedia bipartita</i> Girty .....	C	<i>Derbyia texta</i> Cooper and Grant.....	C
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	SA	<i>Dielasma</i> sp. ....	VR
<i>Hustedia sculptilis</i> Cooper and Grant.....	VR	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	A
<i>Leiorhynchoidea</i> sp. ....	VR	<i>Dyoros (Tetragonetes) quadrangulatus</i> Cooper and Grant..	VR
<i>Lepidocrania sublamellosa</i> Cooper and Grant.....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR
<i>Leurosina lata</i> Cooper and Grant .....	C	<i>Grandaurispina crassa</i> Cooper and Grant .....	C
<i>Liosotella parva</i> Cooper and Grant .....	C	<i>Heteralosia hystricula</i> (Girty).....	C
<i>Liosotella wordensis</i> (R.E. King) .....	A	<i>Heteralosia</i> sp. ....	R
		<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	A

	Rarity code
LOCALITY N706d - Continued	
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR
<i>Hustedia pugilla pluscula</i> Cooper and Grant .....	VR
<i>Liosotella irregularis</i> Cooper and Grant .....	VA
<i>Meekella skenoides</i> Girty .....	A
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	R
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C
<i>Rhynchopora tenera</i> Cooper and Grant .....	VR
<i>Spiriferella propria</i> Cooper and Grant .....	A
<i>Spiriferinaella scalpata</i> Cooper and Grant .....	VR
<i>Tautosia transenna</i> Cooper and Grant .....	VR
<i>Thamnusia phragmophora</i> Cooper and Grant .....	R
<i>Waagenoconcha magnifica</i> Cooper and Grant .....	VR
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR

LOCALITY N706e : Word Formation, Willis Ranch  
Member

<i>Acanthocrania intermedia</i> Cooper and Grant .....	C
<i>Acolosia? anomala</i> Cooper and Grant .....	VR
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	C
<i>Allorhynchus triangulatum</i> Cooper and Grant .....	VR
<i>Bothrionia transversa</i> Cooper and Grant .....	VR
<i>Cactosteges anomalus</i> Cooper and Grant .....	R
<i>Cancrinella subquadrata</i> Cooper and Grant .....	R
<i>Cenorhynchia fracidia</i> Cooper and Grant .....	R
<i>Cleiothyridina rara</i> Cooper and Grant .....	VR
<i>Collemataria elongata</i> Cooper and Grant .....	VA
<i>Composita enormis</i> Cooper and Grant .....	A
<i>Composita parasulcata</i> Cooper and Grant .....	VA
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VA
<i>Costispinifera costata</i> (R.E. King) .....	R
<i>Crurithyris tholiaphor</i> Cooper and Grant .....	C
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VA
<i>Derbyia filosa</i> Cooper and Grant .....	A
<i>Derbyia pannucia</i> Cooper and Grant .....	A
<i>Derbyia</i> sp. ....	R
<i>Derbyia texta</i> Cooper and Grant .....	A
<i>Dielasma adamanteum</i> Cooper and Grant .....	A
<i>Dielasma adamanteum angulatum</i> Cooper and Grant .....	VR
<i>Dielasma compactum</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	VR
<i>Dielasma zebratum</i> Cooper and Grant .....	A
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	VA
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	A
<i>Dyoros (Tetragonetes) wordensis</i> Cooper and Grant .....	A
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VA
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VA
<i>Ectoposia wildei</i> Cooper and Grant .....	VR
<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	C
<i>Grandaurispina bella</i> Cooper and Grant .....	R
<i>Grandaurispina elongata</i> Cooper and Grant .....	C
<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	VA
<i>Heteralosia hystricula</i> (Girty) .....	VA
<i>Heterelasma concavum</i> Cooper and Grant .....	C
<i>Heterelasma pentagonum</i> Cooper and Grant .....	R
<i>Heterelasma solidum</i> Cooper and Grant .....	R
<i>Hustedia pugilla pugilla</i> Cooper and Grant .....	VA
<i>Hustedia</i> sp. ....	C
<i>Leiorhynchoidea amygdaloidea</i> Cooper and Grant .....	R
<i>Leiorhynchoidea</i> sp. ....	VR
<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	A
<i>Leurosina lata</i> Cooper and Grant .....	C
<i>Liosotella parva</i> Cooper and Grant .....	VR
<i>Liosotella wordensis</i> (R.E. King) .....	VA
<i>Lirellaria? sp. 1</i> .....	VR

	Rarity code
<i>Meekella skenoides</i> Girty .....	VA
<i>Megousia definita</i> Cooper and Grant .....	C
<i>Megousia flexuosa</i> Cooper and Grant .....	VR
<i>Metriolepis pulvinata</i> Cooper and Grant .....	R
<i>Neospirifer amphigyus</i> Cooper and Grant .....	VR
<i>Paranorella</i> sp. 1 .....	VR
<i>Paraspiriferina laqueata</i> Cooper and Grant .....	R
<i>Paraspiriferina setulosa</i> Cooper and Grant .....	A
<i>Paraspiriferina</i> sp. ....	VR
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	VA
<i>Paucispinifera magnispina</i> Cooper and Grant .....	VR
<i>Petasmatherus opulus</i> Cooper and Grant .....	R
<i>Petrocrania teretis</i> Cooper and Grant .....	VR
<i>Phrenophoria subcarinata</i> Cooper and Grant .....	C
<i>Pseudodielasma gibberum</i> Cooper and Grant .....	C
<i>Pseudodielasma lobatum</i> Cooper and Grant .....	VA
<i>Pseudodielasma minor</i> (R.E. King) .....	VA
<i>Pseudodielasma ovatum</i> Cooper and Grant .....	VA
<i>Pseudodielasma pingue</i> Cooper and Grant .....	A
<i>Pseudodielasma</i> sp. ....	SA
<i>Pseudodielasma subcirculare</i> Cooper and Grant .....	A
<i>Pseudodielasma sulcatum</i> Cooper and Grant .....	A
<i>Pseudoleptodus</i> sp. ....	VR
<i>Reticulariina senticosa</i> Cooper and Grant .....	R
<i>Reticulariina</i> sp. ....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	VA
<i>Rhynchopora palumbula</i> Cooper and Grant .....	C
<i>Spiriferella calcarata</i> Cooper and Grant .....	C
<i>Spiriferella gravis</i> Cooper and Grant .....	C
<i>Spiriferellina hilli</i> (Girty) .....	VA
<i>Stenosisma renode</i> Cooper and Grant .....	R
<i>Stenosisma</i> sp. ....	VR
<i>Tautosia transenna</i> Cooper and Grant .....	A
<i>Texarina elongata</i> Cooper and Grant .....	VR
<i>Texarina oblongata</i> Cooper and Grant .....	C
<i>Thedusia procera</i> Cooper and Grant .....	A
<i>Tropidelasma anthicum</i> Cooper and Grant .....	VR
<i>Undulella undulata</i> Cooper and Grant .....	VA
<i>Waagenoconcha magnifica</i> Cooper and Grant .....	C
<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	VA
<i>Xenosteges quadratus</i> Cooper and Grant .....	C
<i>Yakovlevia hessorum</i> Cooper and Grant .....	VA

LOCALITY N706f : Road Canyon Formation

<i>Acosarina mesoplatys</i> (R.E. King) .....	R
<i>Altiplecus</i> sp. 2 .....	VR
<i>Cenorhynchia saginata</i> Cooper and Grant .....	R
<i>Composita crassa</i> Cooper and Grant .....	R
<i>Composita enormis</i> Cooper and Grant .....	VR
<i>Composita pilula</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	VR
<i>Coscinophora magnifica</i> Cooper and Grant .....	VR
<i>Costispinifera rugatula</i> (Girty) .....	VR
<i>Crurithyris minutalis</i> Cooper and Grant .....	R
<i>Cyclacantharia transitoria</i> Cooper and Grant .....	VR
<i>Derbyia filosa</i> Cooper and Grant .....	R
<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	VR
<i>Echinauris bella</i> Cooper and Grant .....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	VR
<i>Echinauris lappacea</i> Cooper and Grant .....	R
<i>Elassonia micraria</i> Cooper and Grant .....	VR
<i>Enteleles densus</i> Cooper and Grant .....	VR
<i>Enteleles</i> sp. ....	R
<i>Heterelasma glansfagea</i> Cooper and Grant .....	C

	Rarity code		Rarity code
LOCALITY N706f - Continued			
<i>Hustedia consuta</i> Cooper and Grant .....	C	<i>Petasmatherus opulus</i> Cooper and Grant .....	VR
<i>Hustedia cuneata</i> Cooper and Grant .....	R	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Spiriferella calcarata</i> Cooper and Grant .....	VR
<i>Metriolepis ziczac</i> Cooper and Grant .....	R	<i>Theodusia procera</i> Cooper and Grant .....	VR
<i>Neophricadothyris crassibecca</i> Cooper and Grant .....	VR	<i>Yakovlevia hessorum</i> Cooper and Grant .....	VR
<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR	LOCALITY N707 : Skinner Ranch Formation, Sullivan	
<i>Paraspiriferina cellulana</i> Cooper and Grant .....	R	Peak Member	
<i>Paucispinifera</i> sp. ....	VR	<i>Antronaria emarginata</i> Cooper and Grant .....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant .....	VR	<i>Antronaria transversa</i> (R.E. King) .....	VR
<i>Petasmatherus nitidus</i> Cooper and Grant .....	R	<i>Antronaria voluminosa</i> Cooper and Grant .....	R
<i>Petasmatherus pumilus</i> Cooper and Grant .....	C	<i>Cartorhium zoyei</i> Cooper and Grant .....	VR
<i>Phrenophoria? compressa</i> Cooper and Grant .....	VR	<i>Chonosteges limbatus</i> Cooper and Grant .....	VR
<i>Phrenophoria</i> sp. ....	VR	<i>Composita apheles</i> Cooper and Grant .....	C
<i>Reticulariina</i> sp. ....	VR	<i>Derbyia nasuta</i> Girty .....	R
<i>Rhamnaria vinnula</i> Cooper and Grant .....	VR	<i>Enteleles rotundobesus</i> Cooper and Grant .....	R
<i>Rhynchopora hebetata</i> Cooper and Grant .....	C	<i>Enteleles</i> sp. ....	VR
<i>Rhytisia rugosa</i> Cooper and Grant .....	R	<i>Eolyttonia gigantea</i> Cooper and Grant .....	VR
<i>Spiriferella</i> sp. ....	VR	<i>Geyerella hessi</i> Cooper and Grant .....	C
<i>Stenoscisma calvatum</i> Cooper and Grant .....	VR	<i>Limbella limbata</i> Cooper and Grant .....	R
<i>Stenoscisma camurum</i> Cooper and Grant .....	R	<i>Meekella caperata</i> Cooper and Grant .....	R
<i>Stenoscisma maniculum</i> Cooper and Grant .....	VR	<i>Meekella hessensis</i> R.E. King .....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Oncosarina spinicostata</i> Cooper and Grant .....	R
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	VR	<i>Rhipidomella hessensis</i> R.E. King .....	VR
<i>Texarina wordensis</i> (R.E. King) .....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	C
<i>Tropidelasma corniculum</i> Cooper and Grant .....	R	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
LOCALITY N706g : Lenox Hills Formation		<i>Stenoscisma hadrum</i> Cooper and Grant .....	VR
<i>Enteleles wolfcampensis</i> R.E. King .....	VR	LOCALITY N707a : Skinner Ranch Formation, Decie	
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	Ranch Member	
<i>Parenteleles superbus</i> Cooper and Grant .....	R	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	C
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	R
LOCALITY N706x : Neal Ranch Formation		<i>Acritosia teguliferoides</i> (R.E. King) .....	VR
<i>Chelononia straminea</i> Cooper and Grant .....	VR	<i>Antronaria dissona</i> Cooper and Grant .....	VR
<i>Chonetinella costellata</i> Cooper and Grant .....	VR	<i>Antronaria emarginata</i> Cooper and Grant .....	VR
<i>Chonetinella</i> sp. 1 .....	VR	<i>Antronaria titania</i> Cooper and Grant .....	C
<i>Diplanus catatonus</i> Cooper and Grant .....	VR	<i>Antronaria voluminosa</i> Cooper and Grant .....	VR
<i>Eolyttonia fredericksi</i> (R.E. King) .....	VR	<i>Cancrinella</i> sp. ....	VR
<i>Hustedia trita trita</i> Cooper and Grant .....	VR	<i>Cartorhium zoyei</i> Cooper and Grant .....	R
<i>Juresania</i> sp. 2 .....	VR	<i>Chonosteges matutinus</i> Cooper and Grant .....	R
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	<i>Chonosteges variabilis</i> Cooper and Grant .....	VR
<i>Linoproductus semisulcatus</i> Cooper and Grant .....	R	<i>Composita apheles</i> Cooper and Grant .....	C
<i>Nudauris splendens</i> Cooper and Grant .....	VR	<i>Composita discina</i> Cooper and Grant .....	C
<i>Nudauris tribulosa</i> Cooper and Grant .....	VR	<i>Compressoproductus concentricus</i> Cooper and Grant .....	VR
<i>Reticulatia robusta</i> Cooper and Grant .....	VR	<i>Coscinophora monilifera</i> Cooper and Grant .....	C
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Crurithyris</i> sp. a .....	VR
LOCALITY N706z : Word Formation, China Tank		<i>Cyclacantharia gigantea</i> Cooper and Grant .....	VR
Member		<i>Derbyia nasuta</i> Girty .....	A
<i>Acanthocrania conferta</i> Cooper and Grant .....	VR	<i>Dielasma hessense</i> Cooper and Grant .....	VR
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Cartorhium chelomatum</i> Cooper and Grant .....	VR	<i>Diplanus apochordus</i> Cooper and Grant .....	R
<i>Collemataria elongata</i> Cooper and Grant .....	R	<i>Diplanus lamellatus</i> (R.E. King) .....	C
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	R	<i>Diplanus rarus</i> Cooper and Grant .....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	R	<i>Enteleles rotundobesus</i> Cooper and Grant .....	A
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	R	<i>Eolyttonia gigantea</i> Cooper and Grant .....	C
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	R	<i>Geyerella hessi</i> Cooper and Grant .....	A
<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	VR	<i>Goniarina futilis</i> Cooper and Grant .....	VR
<i>Heteralosia hystricula</i> (Girty) .....	R	<i>Hustedia cepacea</i> Cooper and Grant .....	C
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR	<i>Limbella limbata</i> Cooper and Grant .....	R
<i>Liosotella wordensis</i> (R.E. King) .....	R	<i>Linoproductus angustus</i> R.E. King .....	VR
<i>Meekella skenoides</i> Girty .....	VR	<i>Meekella caperata</i> Cooper and Grant .....	VR
<i>Paraspiriferina laqueata</i> Cooper and Grant .....	VR	<i>Meekella enormis</i> Cooper and Grant .....	C
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	R	<i>Meekella hessensis</i> R.E. King .....	R
		<i>Nudauris enigmatica</i> Cooper and Grant .....	VR
		<i>Oncosarina rotunda</i> Cooper and Grant .....	C

	Rarity code		Rarity code
LOCALITY N707a - Continued		LOCALITY N707d : Skinner Ranch Formation, Sullivan Peak Member	
<i>Peniculauris</i> sp. 1 .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R
<i>Reticulariina tetrica</i> Cooper and Grant .....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	R
<i>Rhamnaria grandis</i> Cooper and Grant .....	VR	<i>Allorhynchus</i> sp. ....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	R	<i>Antronaria voluminosa</i> Cooper and Grant .....	R
<i>Rhynchopora patula</i> Cooper and Grant .....	VR	<i>Cartorhium zoyei</i> Cooper and Grant .....	VR
<i>Rhynchopora</i> sp. 1 .....	VR	<i>Chonosteges variabilis</i> Cooper and Grant .....	VR
<i>Rugaria crassa</i> Cooper and Grant .....	R	<i>Composita apheles</i> Cooper and Grant .....	R
<i>Scacchinella titan</i> Cooper and Grant .....	A	<i>Composita bucculenta</i> Cooper and Grant .....	R
<i>Spyridiophora reticulata</i> (R.E. King) .....	R	<i>Compressoproducitus parvus</i> Cooper and Grant .....	VR
<i>Stenoscisma problematicum</i> Cooper and Grant .....	C	<i>Coscinophora monilifera</i> Cooper and Grant .....	VR
<i>Thamnosia parvispinosa</i> (Stehli) .....	R	<i>Crurithyris</i> sp. b .....	VR
<i>Tropidelasma rhamphodes</i> Cooper and Grant .....	VA	<i>Derbyia crenulata</i> Girty .....	VR
	*	<i>Derbyia nasuta</i> Girty .....	VR
		<i>Derbyia</i> sp. ....	VR
LOCALITY N707b : Skinner Ranch Formation, Sullivan Peak Member		<i>Diplanus lamellatus</i> (R.E. King) .....	C
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Echinauris</i> sp. ....	VR
<i>Acritosia</i> sp. ....	R	<i>Enteleles</i> sp. ....	R
<i>Agelesia triangularis</i> (R.E. King) .....	VR	<i>Eolyttonia</i> sp. ....	VR
<i>Chondronia</i> sp. ....	VR	<i>Glyptosteges angustus</i> (R.E. King) .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR
<i>Composita apheles</i> Cooper and Grant .....	R	<i>Goniarina</i> sp. ....	VR
<i>Composita</i> sp. ....	R	<i>Hustedia catella</i> Cooper and Grant .....	R
<i>Derbyia crenulata</i> Girty .....	VR	<i>Kochiproductus</i> sp. 5 .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	VR	<i>Meekella hessensis</i> R.E. King .....	C
<i>Echinauris</i> sp. ....	VR	<i>Micraphelia</i> sp. ....	VR
<i>Enteleles</i> sp. ....	VR	<i>Neophricadothyris catatona</i> Cooper and Grant .....	C
<i>Eolyttonia</i> sp. ....	VR	<i>Neophricadothyris</i> sp. ....	R
<i>Geyerella hessi</i> Cooper and Grant .....	VR	<i>Oncosarina</i> sp. ....	VR
<i>Glyptosteges angustus</i> (R.E. King) .....	R	<i>Phrenophoria depressa</i> Cooper and Grant .....	R
<i>Glyptosteges intricatus</i> Cooper and Grant .....	R	<i>Phrenophoria</i> sp. 1 .....	VR
<i>Goniarina</i> sp. ....	VR	<i>Pontisia nanas</i> (Stehli) .....	VR
<i>Hercosia uddeni</i> (Böse) .....	VR	<i>Pseudodielasma</i> sp. ....	VR
<i>Hustedia cepacea</i> Cooper and Grant .....	VR	<i>Reticulariina impressa</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	VR	<i>Reticulariina tetrica</i> Cooper and Grant .....	VR
<i>Isogramma</i> sp. ....	VR	<i>Rhamnaria grandis</i> Cooper and Grant .....	VR
<i>Lepidospirifer</i> sp. ....	VR	<i>Rhipidomella hessensis</i> R.E. King .....	R
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	R
<i>Linoproductus</i> sp. ....	VR	<i>Stenoscisma hadrum</i> Cooper and Grant .....	VR
<i>Meekella hessensis</i> R.E. King .....	R	<i>Stenoscisma</i> sp. ....	VR
<i>Meekella</i> sp. ....	R	<i>Wellerella</i> sp. 1 .....	R
<i>Metriolepis</i> sp. ....	VR		
<i>Neophricadothyris</i> sp. ....	VR	LOCALITY N707e : Road Canyon Formation	
<i>Peniculauris</i> sp. 1 .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	VA
<i>Reticulariina impressa</i> Cooper and Grant .....	VR	<i>Cenorhynchia saginata</i> Cooper and Grant .....	C
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Chondronia ovalis</i> Cooper and Grant .....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Chonetinetes reversus</i> Cooper and Grant .....	C
<i>Sceletonia crassa</i> Cooper and Grant .....	VR	<i>Collemataria</i> sp. ....	R
<i>Spyridiophora reticulata</i> (R.E. King) .....	R	<i>Composita crassa</i> Cooper and Grant .....	C
<i>Stenoscisma hadrum</i> Cooper and Grant .....	VR	<i>Crenispirifer</i> sp. ....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Crurithyris minutalis</i> Cooper and Grant .....	VR
<i>Teguliferina</i> cf. <i>conida</i> (Stehli) .....	VR	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	C
<i>Torynechus alectorius</i> Cooper and Grant .....	VR	<i>Derbyia cincinnata</i> Cooper and Grant .....	VR
		<i>Derbyia complicata</i> Cooper and Grant .....	C
LOCALITY N707c : Skinner Ranch Formation, Sullivan Peak Member		<i>Derbyia informis</i> Cooper and Grant .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	C
<i>Antronaria dissona</i> Cooper and Grant .....	VR	<i>Derbyia texta</i> Cooper and Grant .....	R
<i>Composita apheles</i> Cooper and Grant .....	R	<i>Dielasma emarginatum</i> Cooper and Grant .....	C
<i>Enteleles</i> sp. ....	VR	<i>Dielasma expansum</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>angulatus</i> Cooper and Grant .....	A
<i>Meekella hessensis</i> R.E. King .....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>endospinus</i> Cooper and Grant .....	C
<i>Metriolepis</i> sp. ....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	C
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>transversus</i> Cooper and Grant .....	A



	Rarity code		Rarity code
LOCALITY N707e - Continued		<i>Leurosina vulgarica</i> Cooper and Grant.....	R
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant.....	VR	<i>Limbella limbata</i> Cooper and Grant.....	VR
<i>Dyoros (Lissosia) parvus</i> Cooper and Grant.....	A	<i>Meekella hessensis</i> R.E. King.....	VR
<i>Echinauris bella</i> Cooper and Grant.....	VA	<i>Metriolepis</i> sp. ....	R
<i>Echinauris irregularis</i> Cooper and Grant.....	VR	<i>Oncosarina spinicostata</i> Cooper and Grant.....	C
<i>Echinauris lappacea</i> Cooper and Grant.....	C	<i>Rhamnaria grandis</i> Cooper and Grant.....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	R	<i>Rhipidomella hessensis</i> R.E. King.....	R
<i>Eolyttonia chaotica</i> Cooper and Grant.....	C	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
<i>Geyerella inexpectata</i> Cooper and Grant.....	VR	LOCALITY N707h : Skinner Ranch Formation	
<i>Glossothyropsis superba</i> Cooper and Grant.....	VR	<i>Acolosia recepta</i> Cooper and Grant.....	R
<i>Grandaurispina</i> sp. 2 .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant.....	C
<i>Heteralosia</i> sp. 2 .....	VR	<i>Acritosia peculiaris</i> Cooper and Grant.....	VR
<i>Heterelasma glansfagea</i> Cooper and Grant.....	A	<i>Anteridocus paucicostatus</i> Cooper and Grant.....	R
<i>Holosia ovalis</i> Cooper and Grant.....	VR	<i>Chondronia ningula</i> Cooper and Grant.....	C
<i>Holotricharina sparsa</i> Cooper and Grant.....	R	<i>Composita</i> sp. ....	R
<i>Hustedia consuta</i> Cooper and Grant.....	VA	<i>Coscinophora monilifera</i> Cooper and Grant.....	A
<i>Hustedia cuneata</i> Cooper and Grant.....	C	<i>Derbyia</i> sp. ....	VR
<i>Hustedia</i> sp. ....	VR	<i>Enteleles rotundobesus</i> Cooper and Grant.....	R
<i>Kutorginella sullivanensis</i> (R.E. King).....	C	<i>Enteleles</i> sp. ....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant.....	VR	<i>Geyerella hessi</i> Cooper and Grant.....	VR
<i>Liosotella costata</i> Cooper and Grant.....	VA	<i>Hustedia</i> sp. ....	VR
<i>Liosotella wordensis</i> (R.E. King).....	C	<i>Meekella caperata</i> Cooper and Grant.....	VR
<i>Meekella calathica</i> Cooper and Grant.....	C	<i>Meekella enormis</i> Cooper and Grant.....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VA	<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Metriolepis ziczac</i> Cooper and Grant.....	VR	<i>Stenoscisma</i> sp. ....	VR
<i>Neophricadothyris cordata</i> Cooper and Grant.....	C	<i>Tropidelasma rhamphodes</i> Cooper and Grant.....	VR
<i>Neospirifer bakeri bakeri</i> R.E. King.....	A	LOCALITY N707ha : Skinner Ranch Formation, Poplar	
<i>Paraspiriferina cellulana</i> Cooper and Grant.....	C	Tank Member	
<i>Paucispinifera costellata</i> Cooper and Grant.....	R	<i>Acosarina dorsisulcata</i> Cooper and Grant.....	C
<i>Paucispinifera sulcata</i> Cooper and Grant.....	R	<i>Acritosia peculiaris</i> Cooper and Grant.....	R
<i>Peniculauris costata</i> Cooper and Grant.....	R	<i>Chonosteges variabilis</i> Cooper and Grant.....	R
<i>Petasmatherus pumilus</i> Cooper and Grant.....	C	<i>Composita</i> sp. ....	R
<i>Phrenophoria planiventra</i> Cooper and Grant.....	VR	<i>Compressoproductus</i> sp. 4 .....	R
<i>Phrenophoria</i> sp. 2 .....	VR	<i>Coscinophora monilifera</i> Cooper and Grant.....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Cryptacanthia</i> sp. 1 .....	VR
<i>Reticulariina subulata</i> Cooper and Grant.....	C	<i>Derbyia crenulata</i> Girty.....	VR
<i>Reticulariina venustula</i> Cooper and Grant.....	VR	<i>Diplanus lamellatus</i> (R.E. King).....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	R	<i>Diplanus rarus</i> Cooper and Grant.....	VR
<i>Rhynchopora sphenoides</i> Cooper and Grant.....	A	<i>Dyoros (Dyoros) consanguineus</i> (Girty).....	R
<i>Rugatia mckeei</i> Cooper and Grant.....	R	<i>Geyerella</i> sp. ....	VR
<i>Spinarella lobata</i> Cooper and Grant.....	R	<i>Hustedia catella</i> Cooper and Grant.....	R
<i>Stenoscisma bonum</i> Cooper and Grant.....	VR	<i>Hustedia cepacea</i> Cooper and Grant.....	R
<i>Stenoscisma camurum</i> Cooper and Grant.....	C	<i>Lepidospirifer</i> sp. ....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Limbella limbata</i> Cooper and Grant.....	VR
<i>Taphroestria peculiaris</i> Cooper and Grant.....	R	<i>Linoproductus angustus</i> R.E. King.....	VR
<i>Tautosia galbina</i> Cooper and Grant.....	R	<i>Meekella hessensis</i> R.E. King.....	R
<i>Tropidelasma corniculum</i> Cooper and Grant.....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Waagenoconcha convexa</i> Cooper and Grant.....	VR	<i>Micraphelia</i> sp. ....	R
<i>Waagenoconcha platys</i> Cooper and Grant.....	C	<i>Nudauris enigmatica</i> Cooper and Grant.....	VR
<i>Yakovlevia sulcata</i> Cooper and Grant.....	A	<i>Oncosarina spinicostata</i> Cooper and Grant.....	A
LOCALITY N707g : Skinner Ranch Formation, Decie		<i>Plectelasma</i> sp. 1 .....	VR
Ranch Member		<i>Reticulariina</i> sp. ....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant.....	R	<i>Rhamnaria grandis</i> Cooper and Grant.....	VR
<i>Acritosia peculiaris</i> Cooper and Grant.....	C	<i>Rhipidomella hessensis</i> R.E. King.....	R
<i>Antronaria voluminosa</i> Cooper and Grant.....	VR	<i>Spinifrons</i> sp. ....	VR
<i>Chonosteges variabilis</i> Cooper and Grant.....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	R
<i>Composita apheles</i> Cooper and Grant.....	R	LOCALITY N707i : Skinner Ranch Formation, Poplar	
<i>Compressoproductus parvus</i> Cooper and Grant.....	VR	Tank Member	
<i>Coscinophora monilifera</i> Cooper and Grant.....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
<i>Derbyia crenulata</i> Girty.....	VR	LOCALITY N707j : Lenox Hills Formation	
<i>Diplanus lamellatus</i> (R.E. King).....	R	<i>Antiquatonia regularis</i> Cooper and Grant.....	VR
<i>Eolyttonia gigantea</i> Cooper and Grant.....	R	<i>Beecheria expansa</i> Cooper and Grant.....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR		
<i>Hustedia catella</i> Cooper and Grant.....	R		



	Rarity code		Rarity code
LOCALITY N707j - Continued			
<i>Derbyia profunda</i> Cooper and Grant.....	VR	<i>Neospirifer mansuetus</i> Cooper and Grant .....	R
<i>Derbyia</i> sp. ....	VR	<i>Nudauris linoispina</i> Cooper and Grant.....	R
<i>Enteleles wolfcampensis</i> R.E. King.....	VR	<i>Peniculauris subcostata</i> (R.E. King) .....	R
<i>Fimbrinia</i> sp. 1 .....	VR	<i>Thamnusia anterospinosa</i> Cooper and Grant.....	VR
<i>Hustedia tripa trita</i> Cooper and Grant.....	VR	<i>Xestosia schucherti</i> (R.E. King) .....	VR
<i>Kozłowskaia anterosulcata</i> Cooper and Grant.....	VR	LOCALITY N707s : Lenox Hills Formation	
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	<i>Scacchinella exasperata</i> Cooper and Grant .....	VR
<i>Meekella magnifica</i> Cooper and Grant.....	VR	LOCALITY N707t : Skinner Ranch Formation, Sullivan	
<i>Neochonetes</i> sp. ....	R	Peak Member	
<i>Nudauris splendens</i> Cooper and Grant.....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	LOCALITY N707u : Skinner Ranch Formation	
<i>Teguliferina boesei</i> R.E. King .....	R	<i>Tropidelasma rhamphodes</i> Cooper and Grant .....	VR
<i>Tropidelasma strobilum</i> Cooper and Grant .....	VR	LOCALITY N707v : Skinner Ranch Formation, Decie	
LOCALITY N707ja : Lenox Hills Formation		Ranch Member	
<i>Eolytonia fredericki</i> (R.E. King) .....	VR	<i>Antronaria voluminosa</i> Cooper and Grant .....	VR
LOCALITY N707-l : Skinner Ranch Formation, Decie		<i>Composita discina</i> Cooper and Grant.....	VR
Ranch Member		<i>Dielasma</i> sp. 1 .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Meekella enormis</i> Cooper and Grant.....	VR
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	R
<i>Antronaria voluminosa</i> Cooper and Grant .....	R	<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR
<i>Cartorhium zoyei</i> Cooper and Grant.....	VR	LOCALITY N707w : Skinner Ranch Formation, Decie	
<i>Collemataria platys</i> Cooper and Grant.....	VR	Ranch Member	
<i>Composita apheles</i> Cooper and Grant .....	R	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	C
<i>Derbyia</i> sp. ....	VR	<i>Acritosia teguliferoides</i> (R.E. King) .....	C
<i>Dielasma</i> sp. ....	VR	<i>Antronaria dissona</i> Cooper and Grant.....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	R	<i>Antronaria titania</i> Cooper and Grant.....	VR
<i>Echinauris</i> sp. ....	VR	<i>Beecheria</i> sp. ....	VR
<i>Hustedia catella</i> Cooper and Grant.....	R	<i>Cartorhium zoyei</i> Cooper and Grant.....	VR
<i>Meekella hessensis</i> R.E. King.....	VR	<i>Chondronia parva</i> Cooper and Grant .....	C
<i>Neophricadothyris</i> sp. ....	VR	<i>Composita discina</i> Cooper and Grant.....	C
<i>Oncosarina spinicostata</i> Cooper and Grant .....	C	<i>Derbyia crenulata</i> Girty .....	VR
<i>Peniculauris</i> sp. 1 .....	VR	<i>Derbyia nasuta</i> Girty .....	R
<i>Rhipidomella hessensis</i> R.E. King.....	R	<i>Enteleles stehlii</i> Cooper and Grant .....	C
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Geyerella hessi</i> Cooper and Grant.....	VR
<i>Tautosia podistra</i> Cooper and Grant .....	C	<i>Hustedia catella</i> Cooper and Grant .....	R
LOCALITY N707m : Lenox Hills Formation		<i>Hystriculina pumila</i> Cooper and Grant.....	VR
<i>Antiquatonia regularis</i> Cooper and Grant .....	VR	<i>Kochiproductus</i> sp. 1 .....	VR
<i>Echinauris interrupta</i> Cooper and Grant.....	R	<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Echinauris subquadrata</i> Cooper and Grant .....	VR	<i>Meekella caperata</i> Cooper and Grant.....	A
<i>Hystriculina sulcata</i> Cooper and Grant.....	VR	<i>Meekella enormis</i> Cooper and Grant.....	R
<i>Kutorginella uddeni</i> Cooper and Grant .....	VR	<i>Orthotichia newelli</i> Cooper and Grant.....	C
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	VA
<i>Meekella prionota</i> Cooper and Grant .....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Neophricadothyris transversa</i> Cooper and Grant.....	VR	<i>Stenoscisma hadrum</i> Cooper and Grant.....	R
LOCALITY N707n : Lenox Hills Formation		<i>Stenoscisma pansum</i> Cooper and Grant.....	VR
<i>Echinauris interrupta</i> Cooper and Grant.....	VR	LOCALITY N707x : Skinner Ranch Formation, Decie	
<i>Hystriculina</i> sp. ....	VR	Ranch Member	
<i>?Stenoscisma problematicum</i> Cooper and Grant .....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
LOCALITY N707o : Lenox Hills Formation		<i>Composita apheles</i> Cooper and Grant .....	VR
<i>Antiquatonia regularis</i> Cooper and Grant .....	VR	<i>Geyerella hessi</i> Cooper and Grant.....	VR
<i>Hystriculina</i> sp. ....	VR	<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Nudauris splendens</i> Cooper and Grant.....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	R
LOCALITY N707q : Cathedral Mountain Formation		LOCALITY N707z : Skinner Ranch Formation	
<i>Anemonaria sublaevis</i> (R.E. King) .....	R	<i>Derbyia nasuta</i> Girty .....	VR
<i>Dyros (Lissosia) vagabundus</i> Cooper and Grant.....	R	<i>Enteleles rotundobesus</i> Cooper and Grant .....	VR
<i>Dyros (Tetragonetes) lateralis</i> Cooper and Grant .....	VR	<i>Limbella wolfcampensis</i> (R.E. King) .....	R
<i>Hercosia uddeni</i> (Böse) .....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	R	<i>Tropidelasma rhamphodes</i> Cooper and Grant .....	R
<i>Institella leonardensis</i> (R.E. King).....	VR	LOCALITY N708 : Cathedral Mountain Formation	
<i>Megousia leumonata</i> Cooper and Grant .....	A	<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Neophricadothyris bullata</i> Cooper and Grant.....	VR		

	Rarity code		Rarity code
LOCALITY N708 - Continued		<i>Composita apheles</i> Cooper and Grant .....	C
<i>Agelesia triangularis</i> (R.E. King) .....	C	<i>Compressoproductus parvus</i> Cooper and Grant .....	C
<i>Anteridocus erugatus</i> Cooper and Grant .....	VR	<i>Eolyttonia</i> sp. ....	R
<i>Anteridocus gongylus</i> Cooper and Grant .....	VR	<i>Glyptosteges angustus</i> (R.E. King) .....	VR
<i>Cartorhium coristum</i> Cooper and Grant .....	R	<i>Hustedia cepacea</i> Cooper and Grant .....	C
<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR	<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Choanodus irregularis</i> Cooper and Grant .....	C	<i>Meekella hessensis</i> R.E. King .....	R
<i>Choanodus perfectus</i> Cooper and Grant .....	R	<i>Nudauris enigmatica</i> Cooper and Grant .....	C
<i>Chonosteges pulcher</i> Cooper and Grant .....	R	<i>Oncosarina spinicostata</i> Cooper and Grant .....	A
<i>Composita bucculenta</i> Cooper and Grant .....	VR	<i>Peniculauris</i> sp. I .....	VR
<i>Composita imbricata</i> Cooper and Grant .....	R	<i>Plectelasma kingi</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	VR	<i>Rhamnaria grandis</i> Cooper and Grant .....	VR
<i>Compressoproductus thomasi</i> Cooper and Grant .....	C	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Derbyia complicata</i> Cooper and Grant .....	R	<i>Spyridiophora reticulata</i> (R.E. King) .....	R
<i>Derbyia laqueata</i> Cooper and Grant .....	VR	<i>Stenoscisma hadrum</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Stenoscisma pansum</i> Cooper and Grant .....	VR
<i>Dielasma perplexum</i> Cooper and Grant .....	VR	LOCALITY N708p : Gaptank Formation	
<i>Diplanus lamellatus</i> (R.E. King) .....	C	<i>Composita discina</i> Cooper and Grant .....	VR
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	VR	<i>Meekella texana</i> R.E. King .....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	VR	LOCALITY N708q : Skinner Ranch Formation, Decie	
<i>Echinauris</i> sp. ....	VR	Ranch Member	
<i>Enteleles plummeri</i> R.E. King .....	A	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
<i>Eolyttonia pocillata</i> Cooper and Grant .....	VR	<i>Acritosia teguliferoides</i> (R.E. King) .....	R
<i>Hercosia uddeni</i> (Böse) .....	VR	<i>Antiquatonia hessensis</i> (R.E. King) .....	VR
<i>Heterelasma gibbosum</i> Cooper and Grant .....	R	<i>Antiquatonia</i> sp. ....	VR
<i>Hustedia ampullacea</i> Cooper and Grant .....	VR	<i>Antronaria titania</i> Cooper and Grant .....	VR
<i>Hustedia lusca</i> Cooper and Grant .....	C	<i>Composita discina</i> Cooper and Grant .....	R
<i>Institella leonardensis</i> (R.E. King) .....	C	<i>Derbyia nasuta</i> Girty .....	VR
<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR	<i>Enteleles stehlii</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	C	<i>Eolyttonia gigantea</i> Cooper and Grant .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	<i>Geyerella hessi</i> Cooper and Grant .....	VR
<i>Metriolepis larina</i> Cooper and Grant .....	C	<i>Glyptosteges angustus</i> (R.E. King) .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	R	<i>Limbella limbata</i> Cooper and Grant .....	R
<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	R	<i>Martinia</i> sp. I .....	VR
<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	VR	<i>Meekella</i> sp. ....	R
<i>Reticulariina</i> sp. ....	VR	<i>Orthotichia newelli</i> Cooper and Grant .....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	A	<i>Scacchinella titan</i> Cooper and Grant .....	A
<i>Rugatia paraindica</i> (McKee) .....	VR	<i>Stenoscisma amoenum</i> Cooper and Grant .....	R
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	R	<i>Stenoscisma hadrum</i> Cooper and Grant .....	VR
<i>Tautosia pulchra</i> Cooper and Grant .....	C	LOCALITY N708u : Cathedral Mountain Formation	
<i>Texarina wordensis</i> (R.E. King) .....	R	<i>Amphipella arcaria</i> Cooper and Grant .....	VA
<i>Torynechus caelatus</i> Cooper and Grant .....	VR	<i>Cenorhynchia</i> sp. ....	R
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	R	<i>Choanodus perfectus</i> Cooper and Grant .....	VR
LOCALITY N708a : Skinner Ranch Formation, Poplar		<i>Composita</i> sp. ....	R
Tank Member		<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	VR
<i>Coscinophora monilifera</i> Cooper and Grant .....	VR	<i>Dyoros (Tetragonetes) giganteus</i> Cooper and Grant .....	VR
LOCALITY N708b : Neal Ranch Formation		<i>Elassonia scitula</i> Cooper and Grant .....	R
<i>Eridmatus marathonsensis</i> Cooper and Grant .....	VR	<i>Glossothyropsis immatura</i> Cooper and Grant .....	R
<i>Linoproductus</i> sp. ....	VR	<i>Goniarina</i> sp. I .....	R
LOCALITY N708c : Cathedral Mountain Formation		<i>Hustedia</i> sp. ....	VR
<i>Cenorhynchia parvula</i> Cooper and Grant .....	VR	<i>Hustedia stataria</i> Cooper and Grant .....	A
<i>Composita imbricata</i> Cooper and Grant .....	R	<i>Hustedia trisepta</i> Cooper and Grant .....	C
<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	VR	<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR
<i>Derbyia informis</i> Cooper and Grant .....	VR	<i>Martinia miranda</i> Cooper and Grant .....	C
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C	<i>Metriolepis tegulata</i> Cooper and Grant .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	R
LOCALITY N708e : Skinner Ranch Formation, Poplar		<i>Niviconia globosa</i> (R.E. King) .....	VR
Tank Member		<i>Nucleospira cunctata</i> Cooper and Grant .....	VA
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Petrocrania</i> sp. ....	VR
<i>Acritosia peculiaris</i> Cooper and Grant .....	C	<i>Phrenophoria nesiotes</i> Cooper and Grant .....	A
<i>Antronaria voluminosa</i> Cooper and Grant .....	A	<i>Pseudoleptodus?</i> sp. 4 .....	VR
<i>Cartorhium zoyei</i> Cooper and Grant .....	VR	<i>Ptygmactrum angulatum</i> Cooper and Grant .....	VR
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Rallacosta laminata</i> Cooper and Grant .....	C

	Rarity code		Rarity code
LOCALITY N708u - Continued		LOCALITY N709g : Hess Formation	
<i>Scenesia extensa</i> Cooper and Grant .....	C	<i>Oncosarina spinicostata</i> Cooper and Grant .....	C
<i>Stenoscisma fabarium</i> Cooper and Grant .....	A	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	VR	LOCALITY N709h : Hess Formation	
<i>Thedusia discissa</i> Cooper and Grant .....	VA	<i>Petasmatherus mundus</i> Cooper and Grant .....	VR
LOCALITY N708v : Skinner Ranch Formation, Sullivan Peak Member		LOCALITY N709-l : Skinner Ranch Formation, Sullivan Peak Member	
<i>Enteleles</i> sp. ....	VR	<i>Glyptosteges angustus</i> (R.E. King) .....	VR
LOCALITY N708w : Neal Ranch Formation		<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Parenteleles superbus</i> Cooper and Grant .....	VR	LOCALITY N709o : Cathedral Mountain Formation	
LOCALITY N708x : Cathedral Mountain Formation		<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Enteleles plummeri</i> R.E. King .....	VR	<i>Limbella</i> sp. ....	R
LOCALITY N708y : Neal Ranch Formation		<i>Texarina wordensis</i> (R.E. King) .....	VR
<i>Diplanus catatonus</i> Cooper and Grant .....	VR	<i>Xestosia schucherti</i> (R.E. King) .....	VR
LOCALITY N708z : Skinner Ranch Formation, Decie Ranch Member		LOCALITY N709t : Lenox Hills Formation	
<i>Tropidelasma rhaphodes</i> Cooper and Grant .....	R	<i>Antiquatonia</i> sp. ....	VR
LOCALITY N709 : Cathedral Mountain Formation		<i>Beecheria</i> sp. ....	VR
<i>Cartorhium latum</i> (R.E. King) .....	VR	<i>Composita</i> sp. ....	VR
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Composita strongyle</i> Cooper and Grant .....	R
<i>Enteleles plummeri</i> R.E. King .....	VR	<i>Enteleles wolfcampensis</i> R.E. King .....	R
<i>Institella leonardensis</i> (R.E. King) .....	R	<i>Hystriculina sulcata</i> Cooper and Grant .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	<i>Limbella wolfcampensis</i> (R.E. King) .....	VR
<i>Torynechus caelatus</i> Cooper and Grant .....	VR	<i>Meekella magnifica</i> Cooper and Grant .....	VR
<i>Xestosia schucherti</i> (R.E. King) .....	VR	<i>Neophricadothyris catatona</i> Cooper and Grant .....	VR
LOCALITY N709a : Skinner Ranch Formation		<i>Parenteleles superbus</i> Cooper and Grant .....	VR
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Rhynchopora molina</i> Cooper and Grant .....	VR
<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR	<i>Stenoscisma peneleve</i> Cooper and Grant .....	VR
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Teguliferina boesei</i> R.E. King .....	VR
<i>Stenoscisma pyraustoides</i> Cooper and Grant .....	VR	LOCALITY N709u : Skinner Ranch Formation	
LOCALITY N709b : Moran Formation		<i>Acritosia teguliferoides</i> (R.E. King) .....	VR
<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	R	<i>Cartorhium zoyei</i> Cooper and Grant .....	VR
LOCALITY N709c : Road Canyon Formation		<i>Chonetinella biplicata</i> (R.E. King) .....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	C	<i>Derbyia</i> sp. ....	VR
<i>Acritosia? vestibula</i> Cooper and Grant .....	R	<i>Enteleles stehlii</i> Cooper and Grant .....	VR
<i>Anteridocus erugatus</i> Cooper and Grant .....	C	<i>Meekella enormis</i> Cooper and Grant .....	VR
<i>Anteridocus seminudus</i> Cooper and Grant .....	C	<i>Oncosarina</i> sp. ....	VR
<i>Cenorhynchia atmata</i> Cooper and Grant .....	R	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR
<i>Chondronia ovalis</i> Cooper and Grant .....	C	<i>Reticulatia</i> sp. ....	VR
<i>Cleiothyridina nana</i> Cooper and Grant .....	R	<i>Scacchinella titan</i> Cooper and Grant .....	C
<i>Composita crassa</i> Cooper and Grant .....	C	<i>Stenoscisma hadrum</i> Cooper and Grant .....	VR
<i>Coscinophora magnifica</i> Cooper and Grant .....	A	LOCALITY N709v : Skinner Ranch Formation	
<i>Crurithyris minutalis</i> Cooper and Grant .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Derbyia cincinnata</i> Cooper and Grant .....	VR	<i>Antronaria dissona</i> Cooper and Grant .....	VR
<i>Derbyia informis</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Derbyia laqueata</i> Cooper and Grant .....	C	<i>Dielasma</i> sp. ....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	VR	<i>Elliottella varicostata</i> Cooper and Grant .....	VR
<i>Echinauris lappacea</i> Cooper and Grant .....	R	<i>Enteleles stehlii</i> Cooper and Grant .....	VR
<i>Edriosteges compactus</i> Cooper and Grant .....	C	<i>Meekella hessensis</i> R.E. King .....	VR
<i>Elassonia micraria</i> Cooper and Grant .....	VR	<i>Orthotichia newelli</i> Cooper and Grant .....	VR
<i>Hustedia consuta</i> Cooper and Grant .....	R	<i>Rhipidomella hessensis</i> R.E. King .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	A	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	<i>Teguliferina conida</i> (Stehli) .....	R
<i>Neospirifer thescelus</i> Cooper and Grant .....	R	LOCALITY N709w : Lenox Hills Formation	
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	<i>Derbyia nasuta</i> Girty .....	VR
<i>Spiriferellina tricola</i> Cooper and Grant .....	VR	<i>Enteleles wolfcampensis</i> R.E. King .....	VR
<i>Stenoscisma calvatum</i> Cooper and Grant .....	R	<i>Meekella magnifica</i> Cooper and Grant .....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Parenteleles superbus</i> Cooper and Grant .....	VR
<i>Taphrosestria peculiaris</i> Cooper and Grant .....	C	<i>Tropidelasma strobilum</i> Cooper and Grant .....	R
		LOCALITY N709z : Skinner Ranch Formation	
		<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY N709z - Continued		<i>Composita crassa</i> Cooper and Grant .....	C
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	R
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Cooperina subcuneata</i> Cooper and Grant .....	VR
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Coscinophora magnifica</i> Cooper and Grant .....	A
LOCALITY N710b : Cathedral Mountain Formation		<i>Cyclacantharia</i> sp. ....	R
<i>Enteleutes leonardensis</i> R.E. King .....	VR	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	C
LOCALITY N710d : Cathedral Mountain Formation,		<i>Derbyia cincinnata</i> Cooper and Grant .....	C
Wedin Member		<i>Derbyia laqueata</i> Cooper and Grant .....	C
<i>Agelesia triangularis</i> (R.E. King) .....	C	<i>Dielasma</i> sp. ....	VR
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Dyros (Dyros) transversus</i> Cooper and Grant .....	R
<i>Derbyia crenulata</i> Girty .....	VR	<i>Echinauris bella</i> Cooper and Grant .....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	VR	<i>Echinauris lappacea</i> Cooper and Grant .....	C
<i>Echinauris</i> sp. ....	VR	<i>Edriosteges compactus</i> Cooper and Grant .....	C
<i>Enteleutes</i> sp. ....	VR	<i>Goniarina striata</i> Cooper and Grant .....	VR
<i>Eolyttonia</i> sp. ....	VR	<i>Heterelasma glansfagea</i> Cooper and Grant .....	VR
<i>Institella leonardensis</i> (R.E. King) .....	VR	<i>Hustedia consuta</i> Cooper and Grant .....	C
<i>Meekella hessensis</i> R.E. King .....	VR	<i>Kutorginella sullivanensis</i> (R.E. King) .....	VR
<i>Rhipidomella</i> sp. ....	VR	<i>Meekella calathica</i> Cooper and Grant .....	A
LOCALITY N710h : Road Canyon Formation		<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VA
<i>Chonetinetes reversus</i> Cooper and Grant .....	A	<i>Neophricadothyris cordata</i> Cooper and Grant .....	VR
<i>Hustedia consuta</i> Cooper and Grant .....	VR	<i>Neospirifer bakeri bakeri</i> R.E. King .....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	VR
LOCALITY N710i : Road Canyon Formation		<i>Peniculauris costata</i> Cooper and Grant .....	VR
<i>Chonetinetes reversus</i> Cooper and Grant .....	VR	<i>Petasmatherus pumilus</i> Cooper and Grant .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	R	<i>Reticulariina venustula</i> Cooper and Grant .....	C
<i>Peniculauris costata</i> Cooper and Grant .....	VR	<i>Stenosisma calvatum</i> Cooper and Grant .....	VR
LOCALITY N710r : Skinner Ranch Formation, Sullivan		<i>Stenosisma</i> sp. ....	VR
Peak Member		<i>Taphroestria peculiaris</i> Cooper and Grant .....	A
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Texarina wordensis</i> (R.E. King) .....	VR
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	LOCALITY N710w : Lenox Hills Formation	
<i>Antronaria voluminosa</i> Cooper and Grant .....	VR	<i>Limbella wolfcampensis</i> (R.E. King) .....	VR
<i>Cancrinella fragosa</i> Cooper and Grant .....	VR	LOCALITY N710x : Skinner Ranch Formation, Poplar	
<i>Cartorhium zoyei</i> Cooper and Grant .....	VR	Tank Member	
<i>Chonosteges variabilis</i> Cooper and Grant .....	R	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
<i>Composita apheles</i> Cooper and Grant .....	R	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Dielasma hessense</i> Cooper and Grant .....	VR	LOCALITY N710y : Skinner Ranch Formation, Sullivan	
<i>Enteleutes</i> sp. ....	VR	Peak Member	
<i>Eolyttonia gigantea</i> Cooper and Grant .....	VR	<i>Peniculauris</i> sp. 1 .....	VR
<i>Geyerella hessi</i> Cooper and Grant .....	VR	LOCALITY N710z : Road Canyon Formation	
<i>Glyptosteges intricatus</i> Cooper and Grant .....	R	<i>Composita crassa</i> Cooper and Grant .....	R
<i>Hustedia hessensis</i> R.E. King .....	VR	<i>Dielasma bellulum</i> Cooper and Grant .....	VR
<i>Kochiproductus elongatus</i> Cooper and Grant .....	VR	<i>Dyros (Dyros) angulatus</i> Cooper and Grant .....	R
<i>Kochiproductus</i> sp. 4 .....	VR	<i>Dyros (Dyros) transversus</i> Cooper and Grant .....	R
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Echinauris bella</i> Cooper and Grant .....	R
<i>Megousia</i> sp. ....	VR	<i>Echinauris</i> sp. ....	VR
<i>Nudauris enigmatica</i> Cooper and Grant .....	VR	<i>Heterelasma glansfagea</i> Cooper and Grant .....	VR
<i>Oncosarina spinicostata</i> Cooper and Grant .....	C	<i>Holotricharina sparsa</i> Cooper and Grant .....	VR
<i>Rhamnaria grandis</i> Cooper and Grant .....	VR	<i>Hustedia connorsii</i> Cooper and Grant .....	R
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Kutorginella sullivanensis</i> (R.E. King) .....	VR
<i>Stenosisma hadrum</i> Cooper and Grant .....	R	<i>Meekella calathica</i> Cooper and Grant .....	VR
<i>Tautosia podistra</i> Cooper and Grant .....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	A
<i>Torynechus alectorius</i> Cooper and Grant .....	R	<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	VR
LOCALITY N710u : Road Canyon Formation		<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	A	<i>Petasmatherus pumilus</i> Cooper and Grant .....	VR
<i>Acritosia? vestibula</i> Cooper and Grant .....	R	<i>Reticulariina pristina</i> Cooper and Grant .....	VR
<i>Anteridocus erugatus</i> Cooper and Grant .....	A	<i>Rhamnaria vinnula</i> Cooper and Grant .....	VR
<i>Bothrostegium derbyoideum</i> Cooper and Grant .....	R	<i>Rhynchopora sphenoides</i> Cooper and Grant .....	VR
<i>Cenorhynchia atmeta</i> Cooper and Grant .....	C	<i>Spiriferella</i> sp. ....	VR
<i>Chondronia ovalis</i> Cooper and Grant .....	A	<i>Stenosisma camurum</i> Cooper and Grant .....	VR
<i>Cleiothyridina nana</i> Cooper and Grant .....	R	<i>Waagenoconcha platys</i> Cooper and Grant .....	R
<i>Collemataria</i> sp. ....	VR	LOCALITY N711d : Skinner Ranch Formation	
		<i>Acritosia peculiaris</i> Cooper and Grant .....	R

	Rarity code		Rarity code
LOCALITY N711d - Continued		<i>Echinauris crassa</i> Cooper and Grant.....	VR
<i>Allorhynchus</i> sp. ....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	R
<i>Antronaria titania</i> Cooper and Grant.....	VR	<i>Echinauris</i> sp. ....	VR
<i>Cartorhium zoyei</i> Cooper and Grant.....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	VR
<i>Chonosteges variabilis</i> Cooper and Grant.....	VR	<i>Hercosia uddeni</i> (Böse) .....	C
<i>Composita discina</i> Cooper and Grant.....	VR	<i>Hustedia</i> sp. ....	VR
<i>Compressopproductus concentricus</i> Cooper and Grant.....	VR	<i>Hustedia spicata</i> Cooper and Grant .....	R
<i>Coscinophora monilifera</i> Cooper and Grant.....	VR	<i>Meekella calathica</i> Cooper and Grant.....	VR
<i>Dielasma hessense</i> Cooper and Grant .....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R
<i>Enteleles stehlii</i> Cooper and Grant .....	VR	<i>Micraphelia</i> sp. ....	VR
<i>Eolyttonia gigantea</i> Cooper and Grant.....	VR	<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR
<i>Eolyttonia</i> sp. ....	VR	<i>Niviconia globosa</i> (R.E. King).....	VR
<i>Geyerella hessi</i> Cooper and Grant.....	VR	<i>Nudauris linospina</i> Cooper and Grant.....	R
<i>Hustedia</i> sp. ....	VR	<i>Peniculauris subcostata</i> (R.E. King).....	R
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Reticulariina craticula</i> Cooper and Grant .....	VR
<i>Martinia</i> sp. 1 .....	R	<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR
<i>Nudauris enigmatica</i> Cooper and Grant.....	VR	<i>Rugatia occidentalis parvauris</i> (Newberry) .....	VR
<i>Oncosarina rotunda</i> Cooper and Grant.....	R	<i>Rugatia paraindica</i> (McKee).....	VR
<i>Peniculauris</i> sp. 1 .....	VR	<i>Stenoscisma triquetrum</i> Cooper and Grant.....	VR
<i>Spyridiophora reticulata</i> (R.E. King).....	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	VR
<i>Stenoscisma pansum</i> Cooper and Grant.....	R	<i>Xestosia schucherti</i> (R.E. King) .....	R
LOCALITY N711i : Skinner Ranch Formation		LOCALITY N711r : Cathedral Mountain Formation	
<i>Acritosia teguliferoides</i> (R.E. King).....	VR	<i>Dyoros (Tetragonetes) planus</i> Cooper and Grant.....	R
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Nudauris linospina</i> Cooper and Grant.....	VR
LOCALITY N711k : Skinner Ranch Formation		LOCALITY N711w : Cathedral Mountain Formation	
<i>Enteleles</i> sp. ....	VR	<i>Anemonaria sublaevis</i> (R.E. King) .....	VR
<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR	<i>Composita crassa</i> Cooper and Grant.....	VR
LOCALITY N711o : Skinner Ranch Formation		LOCALITY N711z : Skinner Ranch Formation	
<i>Neophricadothyris catatona</i> Cooper and Grant.....	VR	<i>Chonosteges variabilis</i> Cooper and Grant.....	VR
<i>Stenoscisma pyraustoides</i> Cooper and Grant.....	VR	<i>Composita discina</i> Cooper and Grant.....	VR
LOCALITY N711p : Skinner Ranch Formation		<i>Enteleles</i> sp. ....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant.....	C	<i>Heterelasma</i> sp. 1 .....	VR
<i>Acritosia teguliferoides</i> (R.E. King).....	R	<i>Stenoscisma pyraustoides</i> Cooper and Grant.....	VR
<i>Antronaria dissona</i> Cooper and Grant.....	C	LOCALITY N712d : Hueco Formation	
<i>Composita discina</i> Cooper and Grant.....	VR	<i>Composita</i> sp. ....	R
<i>Crurithyris</i> sp. a .....	VR	<i>Crurithyris</i> sp. ....	C
<i>Derbyia crenulata</i> Girty.....	C	<i>Dielasma</i> sp. ....	VR
<i>Dielasma</i> sp. ....	VR	<i>Heteralosia</i> sp. ....	R
<i>Elliottella varicostata</i> Cooper and Grant.....	VR	<i>Reticulatia</i> sp. ....	VR
<i>Enteleles stehlii</i> Cooper and Grant .....	A	LOCALITY N712e : Hueco Formation	
<i>Hustedia</i> sp. ....	VR	<i>Composita cracens</i> Cooper and Grant.....	R
<i>Hystriculina pumila</i> Cooper and Grant.....	A	<i>Hustedia</i> sp. ....	VR
<i>Kozłowskaia subsphaeroidalis</i> Cooper and Grant .....	A	<i>Kozłowskaia</i> sp. ....	VR
<i>Meekella hessensis</i> R.E. King.....	C	<i>Pontisia franklinensis</i> Cooper and Grant.....	VA
<i>Orthotichia newelli</i> Cooper and Grant.....	R	<i>Reticulariina hueconiana</i> Cooper and Grant.....	VR
<i>Peniculauris</i> sp. 1 .....	VR	<i>Stenoscisma hueconianum</i> (Girty).....	R
<i>Rhamnaria</i> sp. ....	VR	LOCALITY N712m : Hueco Formation	
<i>Rhipidomella hessensis</i> R.E. King.....	C	<i>Pontisia franklinensis</i> Cooper and Grant.....	VA
<i>Rugaria crassa</i> Cooper and Grant.....	VR	<i>Stenoscisma hueconianum</i> (Girty).....	C
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Stenoscisma</i> sp. ....	VR
<i>Spinifrons delicatula</i> Cooper and Grant .....	R	LOCALITY N712n : Skinner Ranch Formation	
LOCALITY N711q : Cathedral Mountain Formation		<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Acosarina mesoplatys</i> (R.E. King).....	R	LOCALITY N712o : Cathedral Mountain Formation	
<i>Anemonaria sublaevis</i> (R.E. King) .....	R	<i>Acosarina mesoplatys</i> (R.E. King).....	A
<i>Cartorhium latum</i> (R.E. King).....	VR	<i>Agelesia triagonalis</i> (R.E. King) .....	VR
<i>Chonosteges variabilis</i> Cooper and Grant.....	VR	<i>Cancrinella</i> sp. ....	VR
<i>Collemataria gregaria</i> Cooper and Grant .....	VR	<i>Cartorhium latum</i> (R.E. King).....	VR
<i>Crurithyris</i> sp. ....	VR	<i>Choanodus irregularis</i> Cooper and Grant.....	R
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant.....	VR	<i>Chonosteges costellatus</i> Cooper and Grant.....	VR
<i>Dyoros (Tetragonetes) giganteus</i> Cooper and Grant.....	VR	<i>Chonosteges pulcher</i> Cooper and Grant .....	VR
<i>Dyoros (Tetragonetes) lateralis</i> Cooper and Grant .....	R		
<i>Dyoros (Tetragonetes) planus</i> Cooper and Grant.....	A		



	Rarity code		Rarity code
LOCALITY N712o - Continued		<i>Echinauris bella</i> Cooper and Grant.....	R
<i>Collemataria gregaria</i> Cooper and Grant.....	VR	<i>Echinauris</i> sp. ....	VR
<i>Composita</i> sp. ....	VR	<i>Hustedia</i> sp. ....	VR
<i>Composita stalagmium</i> Cooper and Grant.....	VR	<i>Kutorginella umbonata</i> (Muir-Wood and Cooper).....	VR
<i>Compressopproductus flabellatus</i> Cooper and Grant.....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	C
<i>Compressopproductus thomasi</i> Cooper and Grant.....	VR	<i>Petasmatherus pumilus</i> Cooper and Grant.....	R
<i>Derbyia laqueata</i> Cooper and Grant.....	VR	<i>Texarina wordensis</i> (R.E. King).....	VR
<i>Derbyia</i> sp. ....	R	LOCALITY N712w : Neal Ranch Formation	
<i>Diplanus lamellatus</i> (R.E. King).....	VR	<i>Acosarina rectimarginata</i> Cooper and Grant.....	SA
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant.....	VR	<i>Cenorhynchia hebata</i> Cooper and Grant.....	R
<i>Echinauris irregularis</i> Cooper and Grant.....	C	<i>Chondronia rectimarginata</i> Cooper and Grant.....	C
<i>Enteleles plummeri</i> R.E. King.....	VR	<i>Derbyia profunda</i> Cooper and Grant.....	A
<i>Enteleles</i> sp. ....	VR	<i>Hemileurus runcinatus</i> Cooper and Grant.....	C
<i>Eolyttonia chaotica</i> Cooper and Grant.....	R	<i>Hystriculina convexa</i> Cooper and Grant.....	VR
<i>Goniarina futilis</i> Cooper and Grant.....	VR	<i>Reticulatia robusta</i> Cooper and Grant.....	VR
<i>Hercosestria laevis</i> Cooper and Grant.....	R	<i>Teguliferina boesei</i> R.E. King.....	A
<i>Hercosia uddeni</i> (Böse).....	VR	LOCALITY N712z : Neal Ranch Formation	
<i>Hustedia compressa</i> Cooper and Grant.....	VR	<i>Diplanus catatonus</i> Cooper and Grant.....	VR
<i>Hustedia</i> sp. ....	VR	<i>Kozlowskia anterosulcata</i> Cooper and Grant.....	VR
<i>Hustedia spicata</i> Cooper and Grant.....	R	<i>Linoproductus semisulcatus</i> Cooper and Grant.....	VR
<i>Institella leonardensis</i> (R.E. King).....	R	<i>Neophricadothyris transversa</i> Cooper and Grant.....	VR
<i>Linoproductus</i> sp. ....	VR	<i>Reticulatia robusta</i> Cooper and Grant.....	VR
<i>Meekella calathica</i> Cooper and Grant.....	R	<i>Spyridiophora distincta</i> Cooper and Stehli.....	VR
<i>Meekella</i> sp. ....	R	LOCALITY N713 : Word Formation, China Tank	
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R	Member	
<i>Metrioilepis tegulata</i> Cooper and Grant.....	VR	<i>Allorhynchus permianum wordense</i> Cooper and Grant.....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant.....	VR	<i>Arionthia blothrachis</i> Cooper and Grant.....	VR
<i>Neophricadothyris</i> sp. ....	VR	<i>Bothrionia nasuta</i> Cooper and Grant.....	VR
<i>Peniculauris subcostata</i> (R.E. King).....	VR	<i>Cactosteges anomalus</i> Cooper and Grant.....	R
<i>Rallacosta actina</i> Cooper and Grant.....	VR	<i>Cartorhium chelomatum</i> Cooper and Grant.....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR	<i>Collemataria elongata</i> Cooper and Grant.....	R
<i>Rhipidomella hispidula</i> Cooper and Grant.....	R	<i>Composita enormis</i> Cooper and Grant.....	VR
<i>Torynechus caelatus</i> Cooper and Grant.....	VR	<i>Composita parasulcata</i> Cooper and Grant.....	VR
<i>Waagenoconcha convexa</i> Cooper and Grant.....	VR	<i>Costispinifera rugatula</i> (Girty).....	R
<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	R	<i>Cyclacantharia transitoria</i> Cooper and Grant.....	R
<i>Xestosia schucherti</i> (R.E. King).....	R	<i>Derbyia filosa</i> Cooper and Grant.....	R
LOCALITY N712p : Skinner Ranch Formation		<i>Derbyia pannucia</i> Cooper and Grant.....	R
<i>Acosarina dorsisulcata</i> Cooper and Grant.....	R	<i>Derbyia texta</i> Cooper and Grant.....	VR
<i>Acritosia peculiaris</i> Cooper and Grant.....	VR	<i>Dielasma adamanteum</i> Cooper and Grant.....	R
<i>Antronaria titania</i> Cooper and Grant.....	R	<i>Dielasma compactum</i> Cooper and Grant.....	R
<i>Cancrinella fragosa</i> Cooper and Grant.....	C	<i>Dielasma</i> sp. ....	VR
<i>Cartorhium zoyei</i> Cooper and Grant.....	VR	<i>Dielasma zebratum</i> Cooper and Grant.....	R
<i>Chonosteges variabilis</i> Cooper and Grant.....	VR	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant.....	R
<i>Composita discina</i> Cooper and Grant.....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper.....	VR
<i>Coscinophora monilifera</i> Cooper and Grant.....	R	<i>Echinosteges tuberculatus</i> (R.E. King).....	VR
<i>Dielasma hessense</i> Cooper and Grant.....	VR	<i>Enteleles wordensis</i> R.E. King.....	C
<i>Geyerella hessi</i> Cooper and Grant.....	VR	<i>Glossothyropsis rectangulata</i> Cooper and Grant.....	VR
<i>Heterelasma</i> sp. ....	VR	<i>Grandaurispina kingorum</i> Muir-Wood and Cooper.....	VR
<i>Hustedia</i> sp. ....	VR	<i>Heteralosia hystricula</i> (Girty).....	VR
<i>Hystriculina pumila</i> Cooper and Grant.....	R	<i>Heterelasma concavum</i> Cooper and Grant.....	R
<i>Limbella limbata</i> Cooper and Grant.....	VR	<i>Hustedia pugilla nasiterna</i> Cooper and Grant.....	C
<i>Linoproductus</i> sp. ....	R	<i>Hustedia sculptilis</i> Cooper and Grant.....	R
<i>Meekella hessensis</i> R.E. King.....	R	<i>Liosotella wordensis</i> (R.E. King).....	VR
<i>Oncosarina spinicostata</i> Cooper and Grant.....	R	<i>Meekella skenoides</i> Girty.....	C
<i>Rhamnaria grandis</i> Cooper and Grant.....	VR	<i>Megousia mucronata</i> Cooper and Grant.....	VR
<i>Spyridiophora reticulata</i> (R.E. King).....	VR	<i>Neospirifer amphigyus</i> Cooper and Grant.....	VR
<i>Stenosisma pansum</i> Cooper and Grant.....	R	<i>Paraspiriferina laqueata</i> Cooper and Grant.....	C
<i>Tautosia podistra</i> Cooper and Grant.....	R	<i>Paucispinifera transversa</i> Cooper and Grant.....	R
<i>Tropidelasma rhamphodes</i> Cooper and Grant.....	VR	<i>Pseudodielasma lobatum</i> Cooper and Grant.....	R
LOCALITY N712q : Road Canyon Formation		<i>Pseudodielasma minor</i> (R.E. King).....	C
<i>Chonetinetes reversus</i> Cooper and Grant.....	VR	<i>Pseudodielasma pingue</i> Cooper and Grant.....	VR
LOCALITY N712t : Road Canyon Formation		<i>Pseudodielasma plicatum</i> Cooper and Grant.....	R
<i>Derbyia</i> sp. ....	VR	<i>Pseudodielasma</i> sp. ....	A



	Rarity code		Rarity code
LOCALITY N713 - Continued		LOCALITY N713k : Neal Ranch Formation	
<i>Pseudoleptodus nodosus</i> Cooper and Grant .....	VR	<i>Echinaria</i> cf. <i>moorei</i> (Dunbar and Condra) .....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	VR	<i>Hystriculina</i> sp. ....	VR
<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR	<i>Nudauris splendens</i> Cooper and Grant .....	VR
<i>Spiriferellina hilli</i> (Girty) .....	C	<i>Rhynchopora molina</i> Cooper and Grant .....	VR
<i>Tautosia transenna</i> Cooper and Grant .....	VR	LOCALITY N713-l : Neal Ranch Formation	
<i>Texarina elongata</i> Cooper and Grant .....	VR	<i>Derbyia profunda</i> Cooper and Grant .....	VR
<i>Thedusia procera</i> Cooper and Grant .....	R	<i>Parenteleles superbus</i> Cooper and Grant .....	VR
<i>Tropidlasma anthicum</i> Cooper and Grant .....	VR	LOCALITY N713m : Skinner Ranch Formation, Sullivan	
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR	Peak Member	
<i>Yakovlevia hessorum</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp.? .....	VR
LOCALITY N713a : Gaptank Formation, Uddenites		<i>Limbella limbata</i> Cooper and Grant .....	VR
Member		<i>Stenosisma hadrum</i> Cooper and Grant .....	VR
<i>Composita discina</i> Cooper and Grant .....	VR	LOCALITY N713n : Skinner Ranch Formation	
<i>Hystriculina sulcata</i> Cooper and Grant .....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Reticulatia</i> sp. 2 .....	VR	LOCALITY N713o : Gaptank Formation, Uddenites	
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	Member	
LOCALITY N713b : Gaptank Formation, Uddenites		<i>Composita</i> sp. ....	VR
Member		<i>Meekella prionota</i> Cooper and Grant .....	VR
<i>Meekella texana</i> R.E. King .....	VR	<i>Parenteleles cooperi</i> R.E. King .....	VR
<i>Scacchinella triangulata</i> Cooper and Grant .....	VR	<i>Teguliferina boesei</i> R.E. King .....	VR
<i>Teguliferina boesei</i> R.E. King .....	VR	LOCALITY N713p : Cathedral Mountain Formation	
LOCALITY N713c : Skinner Ranch Formation, Sullivan		<i>Hustedia spicata</i> Cooper and Grant .....	VR
Peak Member		LOCALITY N713q : Lenox Hills Formation	
<i>Diplanus lamellatus</i> (R.E. King) .....	VR	<i>Composita discina</i> Cooper and Grant .....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Limbella wolfcampensis</i> (R.E. King) .....	VR
<i>Rhamnaria grandis</i> Cooper and Grant .....	VR	<i>Parenteleles superbus</i> Cooper and Grant .....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	VR	LOCALITY N713r : Skinner Ranch Formation, Poplar	
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	Tank Member	
LOCALITY N713d : Skinner Ranch Formation, Sullivan		<i>Oncosarina spinicostata</i> Cooper and Grant .....	VR
Peak Member		<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Echinauris</i> sp. ....	VR	LOCALITY N713s : Skinner Ranch Formation, Decie	
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	Ranch Member	
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Stenosisma hadrum</i> Cooper and Grant .....	VR	LOCALITY N713t : Cathedral Mountain Formation	
LOCALITY N713e : Gaptank Formation		<i>Enteleles plummeri</i> R.E. King .....	VR
<i>Composita</i> sp. ....	VR	<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Echinauris subquadrata</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR
<i>Kozłowskia</i> sp. ....	VR	<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR
<i>Limbella costellata</i> Cooper and Grant .....	VR	LOCALITY N713u : Gaptank Formation, Uddenites	
<i>Reticulatia</i> sp. ....	VR	Member	
LOCALITY N713g : Gaptank Formation, Uddenites		<i>Derbyia profunda</i> Cooper and Grant .....	VR
Member		<i>Derbyia</i> sp. ....	VR
<i>Derbyoides</i> sp. 2 .....	VR	LOCALITY N713v : Cathedral Mountain Formation	
LOCALITY N713h : Neal Ranch Formation		<i>Enteleles</i> sp. ....	VR
<i>Chonetinella</i> sp. ....	VR	<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR
<i>Hustedia trita leptyca</i> Cooper and Grant .....	VR	LOCALITY N713w : Cathedral Mountain Formation	
<i>Meekella prionota</i> Cooper and Grant .....	VR	<i>Enteleles plummeri</i> R.E. King .....	VR
<i>Neospirifer apothescelus</i> Cooper and Grant .....	VR	<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR
<i>Pseudoleptodus conicus</i> Cooper and Grant .....	VR	LOCALITY N713x : Hess Formation	
<i>Reticulatia americana</i> (Dunbar and Condra) .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Spyridiophora distincta</i> Cooper and Stehli .....	VR	<i>Antronaria transversa</i> (R.E. King) .....	VR
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Dielasma longisulcatum</i> Cooper and Grant .....	VR
LOCALITY N713i : Skinner Ranch Formation, Sullivan		<i>Enteleles subcircularis</i> Cooper and Grant .....	R
Peak Member		<i>Limbella</i> sp. 1 .....	VR
<i>Composita</i> sp. ....	VR	<i>Oncosarina whitei</i> (R.E. King) .....	R
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Peniculauris imitata</i> Cooper and Grant .....	VR
LOCALITY N713j : Lenox Hills Formation			
<i>Linoproductus</i> sp. ....	VR		

	Rarity code		Rarity code
LOCALITY N713x - Continued			
<i>Rhipidomella hessensis</i> R.E. King.....	VR	<i>Geyerella hessi</i> Cooper and Grant.....	VR
<i>Thamnosia silicica</i> Cooper and Grant.....	VR	<i>Hustedia catella</i> Cooper and Grant.....	VR
<i>Tschernyschewia inexpectans</i> Cooper and Grant.....	VR	<i>Hustedia</i> sp. ....	VR
LOCALITY N713y : Lenox Hills Formation		<i>Meekella hessensis</i> R.E. King.....	VR
<i>Chonetinella</i> sp. ....	VR	<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Composita discina</i> Cooper and Grant.....	R	<i>Scacchinella titan</i> Cooper and Grant .....	R
<i>Echinauris interrupta</i> Cooper and Grant.....	VR	<i>Teguliferina conida</i> (Stehli).....	C
<i>Hustedia trita leptyca</i> Cooper and Grant .....	R	LOCALITY N714q : Skinner Ranch Formation	
<i>Hystriulina convexa</i> Cooper and Grant .....	VR	<i>Meekella enormis</i> Cooper and Grant.....	VR
<i>Kutorginella uddeni</i> Cooper and Grant .....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	C
<i>Rhipidomella miscella</i> Cooper and Grant.....	R	LOCALITY N714t : Skinner Ranch Formation, Decie	
<i>Stenoscisma</i> sp. 2 .....	R	Ranch Member	
LOCALITY N713z : Skinner Ranch Formation, Sullivan		<i>Acolosia magna</i> Cooper and Grant .....	VR
Peak Member		<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Rhipidomella hessensis</i> R.E. King.....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	R
LOCALITY N714e : Skinner Ranch Formation, Decie		<i>Cartorhium zoyei</i> Cooper and Grant.....	C
Ranch Member		<i>Composita apheles</i> Cooper and Grant .....	VR
<i>Antiquatonia hessensis</i> (R.E. King).....	VR	<i>Compressopproductus concentricus</i> Cooper and Grant.....	R
<i>Elliottella varicostata</i> Cooper and Grant.....	VR	<i>Coscinophora monilifera</i> Cooper and Grant .....	R
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Cyclacantharia gigantea</i> Cooper and Grant .....	VR
LOCALITY N714o : Word Formation, Appel Ranch		<i>Derbyia nasuta</i> Girty .....	C
Member		<i>Enteleles rotundobesus</i> Cooper and Grant .....	A
<i>Allorhynchus triangulatum</i> Cooper and Grant.....	VR	<i>Eolyttonia gigantea</i> Cooper and Grant.....	C
<i>Arionthia germana</i> Cooper and Grant.....	R	<i>Geyerella hessi</i> Cooper and Grant.....	C
<i>Cartorhium orbiculatum</i> Cooper and Grant.....	R	<i>Limbella limbata</i> Cooper and Grant .....	C
<i>Cartorhium retusum</i> Cooper and Grant.....	VR	<i>Linoproductus angustus</i> R.E. King .....	VR
<i>Composita enormis</i> Cooper and Grant .....	R	<i>Meekella enormis</i> Cooper and Grant.....	VR
<i>Ctenalosis fixata</i> Cooper and Stehli.....	VR	<i>Nudauris enigmatica</i> Cooper and Grant.....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	C	<i>Oncosarina rotunda</i> Cooper and Grant.....	C
<i>Derbyia filosa</i> Cooper and Grant .....	VR	<i>Peniculauris</i> sp. 1 .....	VR
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Reticulatia</i> sp. ....	VR
<i>Derbyia texta</i> Cooper and Grant.....	R	<i>Scacchinella titan</i> Cooper and Grant .....	A
<i>Dielasma zebratum</i> Cooper and Grant.....	VR	<i>Tropidelasma rhamphodes</i> Cooper and Grant .....	VA
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant .....	C	LOCALITY N714v : Cathedral Mountain Formation,	
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	C	Wedin Member	
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR	<i>Acosarina mesoplatys</i> (R.E. King).....	C
<i>Echinosteges tuberculatus</i> (R.E. King).....	R	<i>Composita</i> sp. ....	VR
<i>Eolyttonia progressa</i> Cooper and Grant .....	C	<i>Echinauris irregularis</i> Cooper and Grant .....	VR
<i>Grandaurispina bella</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Grandaurispina crassa</i> Cooper and Grant .....	VR	<i>Meekella calathica</i> Cooper and Grant.....	VR
<i>Heteralosia hystricula</i> (Girty).....	R	<i>Neophricadothyris</i> sp. ....	VR
<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	C	<i>Reticulariina subulata</i> Cooper and Grant.....	VR
<i>Liosotella irregularis</i> Cooper and Grant.....	R	<i>Rugatia paraindica</i> (McKee).....	VR
<i>Liosotella tetragonalis</i> Cooper and Grant.....	VR	LOCALITY N714w : Cathedral Mountain Formation,	
<i>Liosotella wordensis</i> (R.E. King).....	VR	Wedin Member	
<i>Meekella skenoides</i> Girty .....	R	<i>Acosarina mesoplatys</i> (R.E. King).....	R
<i>Paraspiriferina rotundata</i> Cooper and Grant.....	R	<i>Agelesia triagonalis</i> (R.E. King).....	VA
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	R	<i>Cartorhium coristum</i> Cooper and Grant .....	C
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper.....	VR	<i>Choanodus irregularis</i> Cooper and Grant.....	R
<i>Thamnosia phragmophora</i> Cooper and Grant .....	VR	<i>Choanodus perfectus</i> Cooper and Grant.....	C
<i>Thedusia procera</i> Cooper and Grant .....	VR	<i>Chondronia bella</i> Cooper and Grant .....	R
<i>Xenosteges quadratus</i> Cooper and Grant .....	C	<i>Chonosteges pulcher</i> Cooper and Grant .....	C
LOCALITY N714p : Skinner Ranch Formation		<i>Chonosteges variabilis</i> Cooper and Grant.....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Collemataria irregularis</i> Cooper and Grant .....	C
<i>Antronaria transversa</i> (R.E. King) .....	VR	<i>Composita bucculenta</i> Cooper and Grant.....	VR
<i>Composita discina</i> Cooper and Grant.....	R	<i>Composita</i> sp. ....	R
<i>Derbyia nasuta</i> Girty .....	VR	<i>Compressopproductus thomasi</i> Cooper and Grant.....	R
<i>Derbyia</i> sp. ....	VR	<i>Coscinophora hortonii</i> (R.E. King).....	C
<i>Diplanus rarus</i> Cooper and Grant.....	VR	<i>Derbyia complicata</i> Cooper and Grant.....	C
<i>Eolyttonia gigantea</i> Cooper and Grant.....	C	<i>Derbyia informis</i> Cooper and Grant.....	VR
		<i>Derbyia laqueata</i> Cooper and Grant .....	VR
		<i>Dielasma obesum</i> Cooper and Grant.....	VR

	Rarity code		Rarity code
LOCALITY N714w - Continued			
<i>Dielasma perplexum</i> Cooper and Grant	VR	<i>Composita</i> sp.	VR
<i>Diplanus lamellatus</i> (R.E. King)	C	<i>Derbyia profunda</i> Cooper and Grant	VR
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant	R	<i>Derbyia</i> sp. 3	VR
<i>Echinauris crassa</i> Cooper and Grant	R	<i>Echinaria</i> sp. 1	VR
<i>Echinauris irregularis</i> Cooper and Grant	R	<i>Echinauris interrupta</i> Cooper and Grant	C
<i>Echinauris</i> sp.	VR	<i>Enteleles</i> sp.	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper	VR	<i>Fimbrinia</i> sp. 1	VR
<i>Enteleles plummeri</i> R.E. King	A	<i>Hustedia trita trita</i> Cooper and Grant	VR
<i>Goniarina futilis</i> Cooper and Grant	VR	<i>Hystriculina dugoutensis</i> (R.E. King)	R
<i>Hercosia uddeni</i> (Böse)	A	<i>Kochiproductus</i> sp. 2	VR
<i>Heterelasma angulatum</i> Cooper and Grant	VR	<i>Kozlowskia anterosulcata</i> Cooper and Grant	R
<i>Heterelasma gibbosum</i> Cooper and Grant	VR	<i>Kutorginella uddeni</i> Cooper and Grant	VR
<i>Hustedia ampullacea</i> Cooper and Grant	R	<i>Limbella wolfcampensis</i> (R.E. King)	VR
<i>Hustedia spicata</i> Cooper and Grant	C	<i>Neochonetes</i> sp.	VR
<i>Institella leonardensis</i> (R.E. King)	VA	<i>Neophricadothyris transversa</i> Cooper and Grant	VR
<i>Meekella calathica</i> Cooper and Grant	A	<i>Neospirifer apothescelus</i> Cooper and Grant	VR
<i>Metriolepis larina</i> Cooper and Grant	R	<i>Teguliferina boesei</i> R.E. King	VR
<i>Neophricadothyris bullata</i> Cooper and Grant	R	<i>Tropidelasma strobilum</i> Cooper and Grant	VR
<i>Neospirifer mansuetus</i> Cooper and Grant	VR	LOCALITY N715a : Skinner Ranch Formation, Decie	
<i>Petrocrania</i> sp.	VR	Ranch Member	
<i>Pseudoleptodus?</i> sp. 6	VR	<i>Antronaria titania</i> Cooper and Grant	VR
<i>Reticulariina craticula</i> Cooper and Grant	VR	<i>Antronaria voluminosa</i> Cooper and Grant	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant	VR	<i>Composita discina</i> Cooper and Grant	VR
<i>Rhipidomella hispidula</i> Cooper and Grant	A	<i>Enteleles rotundobesus</i> Cooper and Grant	VR
<i>Rhynchopora hebetata</i> Cooper and Grant	VR	<i>Limbella limbata</i> Cooper and Grant	VR
<i>Spiriferellina tricola</i> Cooper and Grant	VR	<i>Scacchinella titan</i> Cooper and Grant	VR
<i>Stenoscisma doricranum</i> Cooper and Grant	VR	<i>Spyridiophora reticulata</i> (R.E. King)	VR
<i>Texarina wordensis</i> (R.E. King)	VR	<i>Stenoscisma hadrum</i> Cooper and Grant	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper	R	<i>Stenoscisma problematicum</i> Cooper and Grant	VR
<i>Xestosia schucherti</i> (R.E. King)	VR	LOCALITY N715b : Lenox Hills Formation	
LOCALITY N714wa : Cathedral Mountain Formation,		<i>Antiquatonia costella</i> Cooper and Grant	VR
Wedin Member		<i>Beecheria</i> sp.	VR
<i>Acosarina mesoplatys</i> (R.E. King)	R	<i>Composita strongyle</i> Cooper and Grant	R
<i>Chondronia bella</i> Cooper and Grant	R	<i>Crurithyris tumibilis</i> Cooper and Grant	R
<i>Composita</i> sp.	C	<i>Derbyia</i> sp.	VR
<i>Derbyia complicata</i> Cooper and Grant	VR	<i>Echinauris interrupta</i> Cooper and Grant	VR
<i>Stenoscisma</i> sp.	VR	<i>Hustedia</i> sp.	VR
LOCALITY N714y : Skinner Ranch Formation, Sullivan		<i>Hystriculina</i> sp.	VR
Peak Member		<i>Hystriculina ventroplana</i> Cooper and Grant	R
<i>Acosarina dorsisulcata</i> Cooper and Grant	C	<i>Kutorginella uddeni</i> Cooper and Grant	VR
<i>Acritosia peculiaris</i> Cooper and Grant	VR	<i>Limbella wolfcampensis</i> (R.E. King)	R
<i>Anteridocus paucicostatus</i> Cooper and Grant	C	<i>Linoproductus semisulcatus</i> Cooper and Grant	R
<i>Composita</i> sp.	C	<i>Meekella texana</i> R.E. King	VR
<i>Coscinophora monilifera</i> Cooper and Grant	VR	<i>Neochonetes</i> sp.	VR
<i>Diplanus lamellatus</i> (R.E. King)	VR	<i>Neophricadothyris transversa</i> Cooper and Grant	R
<i>Echinauris</i> sp.	VR	<i>Neospirifer apothescelus</i> Cooper and Grant	VR
<i>Geyerella hessi</i> Cooper and Grant	C	<i>Nudauris convexa</i> Cooper and Grant	VR
<i>Hustedia inconspicua</i> Cooper and Grant	C	<i>Orthotichia kozlowskii</i> R.E. King	R
<i>Meekella hessensis</i> R.E. King	R	<i>Reticulatia huecoensis</i> (R.E. King)	VR
<i>Neophricadothyris</i> sp.	R	<i>Spyridiophora compacta</i> Cooper and Grant	R
<i>Oncosarina spinicostata</i> Cooper and Grant	R	<i>Stenoscisma bellatulum</i> Cooper and Grant	VR
<i>Rhipidomella hessensis</i> R.E. King	VR	<i>Stenoscisma peneleve</i> Cooper and Grant	R
<i>Tropidelasma rhamphodes</i> Cooper and Grant	VR	<i>Stenoscisma</i> sp.	VR
<i>Tropidelasma</i> sp. 1	VR	<i>Striatifera linoproductiformis</i> Cooper and Grant	VR
LOCALITY N714z : Skinner Ranch Formation		<i>Teguliferina boesei</i> R.E. King	VR
Scacchinella titan Cooper and Grant		LOCALITY N715c : Skinner Ranch Formation, Decie	
LOCALITY N715 : Lenox Hills Formation		Ranch Member	
<i>Acosarina</i> sp.	VR	<i>Antronaria dissona</i> Cooper and Grant	VR
<i>Antiquatonia regularis</i> Cooper and Grant	R	<i>Composita apheles</i> Cooper and Grant	VR
<i>Chonetinella</i> sp. 3	VR	<i>Enteleles rotundobesus</i> Cooper and Grant	VR
		<i>Neophricadothyris catatona</i> Cooper and Grant	VR
		<i>Scacchinella titan</i> Cooper and Grant	VR
		<i>Stenoscisma pyraustoides</i> Cooper and Grant	VR

	Rarity code		Rarity code
LOCALITY N715e : Neal Ranch Formation			
<i>Derbyia profunda</i> Cooper and Grant.....	VR	<i>Leiorhynchoidea scelestia</i> Cooper and Grant .....	C
<i>Echinaria</i> sp. 1 .....	VR	<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	VR
<i>Eridmatus</i> sp. ....	VR	<i>Leurosina lata</i> Cooper and Grant .....	R
<i>Hystriaculina convexa</i> Cooper and Grant .....	VR	<i>Leurosina marginata</i> Cooper and Grant .....	VA
<i>Juresania</i> sp. 2 .....	VR	<i>Liosotella irregularis</i> Cooper and Grant .....	A
<i>Kozlowskia</i> sp. ....	VR	<i>Meekella skenoides</i> Girty .....	A
<i>Martinia</i> sp. ....	VR	<i>Megousia definita</i> Cooper and Grant .....	C
<i>Meekella magnifica</i> Cooper and Grant.....	VR	<i>Metriolepis pulvinata</i> Cooper and Grant .....	R
<i>Rhynchopora molina</i> Cooper and Grant .....	VR	<i>Neophricadothyris conara</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Paraspiriferina rotundata</i> Cooper and Grant .....	C
LOCALITY N715f : Skinner Ranch Formation, Sullivan Peak Member		<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	R
<i>Antronaria titania</i> Cooper and Grant.....	VR	<i>Phrenophoria subcarinata</i> Cooper and Grant .....	C
<i>Antronaria voluminosa</i> Cooper and Grant .....	VR	<i>Plectelasma dubium</i> Cooper and Grant.....	R
<i>Composita apheles</i> Cooper and Grant .....	VR	<i>Pseudodielasma globulum</i> Cooper and Grant .....	C
<i>Compressopproductus parvus</i> Cooper and Grant.....	VR	<i>Pseudodielasma ovatum</i> Cooper and Grant.....	C
<i>Enteleles</i> sp. ....	VR	<i>Pseudodielasma</i> sp. ....	C
<i>Geyerella hessi</i> Cooper and Grant.....	C	<i>Reticulariina cerina</i> Cooper and Grant .....	C
<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C
<i>Linoproductus</i> sp. ....	VR	<i>Rhynchopora tenera</i> Cooper and Grant .....	R
<i>Oncosarina spinicostata</i> Cooper and Grant.....	VR	<i>Spiriferella clypeata</i> Cooper and Grant .....	C
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Spiriferella gravis</i> Cooper and Grant.....	R
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Spiriferella</i> sp. ....	VR
<i>Stenosisma problematicum</i> Cooper and Grant.....	R	<i>Spiriferellina hilli</i> (Girty).....	VR
LOCALITY N715h : Skinner Ranch Formation, Sullivan Peak Member		<i>Spiriferellina paucicostata</i> Cooper and Grant.....	R
<i>Eolyttonia</i> sp. ....	VR	<i>Spiriferinaella scalpata</i> Cooper and Grant.....	VR
<i>Geyerella hessi</i> Cooper and Grant.....	VR	<i>Stenosisma renode</i> Cooper and Grant.....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Texarina elongata</i> Cooper and Grant .....	R
LOCALITY N715i : Word Formation, Appel Ranch Member		<i>Thamnosia phragmophora</i> Cooper and Grant .....	R
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	VR	<i>Thedusia procera</i> Cooper and Grant .....	VR
<i>Bothrionia transversa</i> Cooper and Grant .....	C	<i>Tropidelasma anthicum</i> Cooper and Grant .....	VR
<i>Cancrinella distorta</i> Cooper and Grant .....	VR	<i>Waagenoconcha magnifica</i> Cooper and Grant.....	C
<i>Cancrinella subquadrata</i> Cooper and Grant .....	VR	<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	C
<i>Cartorhium orbiculatum</i> Cooper and Grant .....	VR	<i>Xenosteges quadratus</i> Cooper and Grant .....	VR
<i>Cartorhium retusum</i> Cooper and Grant.....	R	<i>Yakovlevia indentata</i> Cooper and Grant .....	C
<i>Composita enormis</i> Cooper and Grant .....	R	LOCALITY N715j : Skinner Ranch Formation, Sullivan Peak Member	
<i>Composita parasulcata</i> Cooper and Grant.....	R	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
<i>Crurithyris major</i> Cooper and Grant.....	C	<i>Cartorhium zoyei</i> Cooper and Grant.....	VR
<i>Ctenalosia fixata</i> Cooper and Stehli .....	A	<i>Composita apheles</i> Cooper and Grant .....	VR
<i>Ctenalosia</i> sp. ....	VR	<i>Compressopproductus parvus</i> Cooper and Grant.....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	C	<i>Coscinophora monilifera</i> Cooper and Grant .....	VR
<i>Derbyia filosa</i> Cooper and Grant .....	R	<i>Geyerella hessi</i> Cooper and Grant.....	VR
<i>Derbyia pannucia</i> Cooper and Grant .....	C	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Derbyia texta</i> Cooper and Grant.....	C	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Dielasma compactum</i> Cooper and Grant .....	R	LOCALITY N715-1 : Lenox Hills Formation	
<i>Dielasma</i> sp. ....	VR	<i>Enteleles</i> sp. ....	VR
<i>Dielasma zebratum</i> Cooper and Grant.....	R	LOCALITY N715m : Skinner Ranch Formation, Sullivan Peak Member	
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	VA	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>quadrangulatus</i> Cooper and Grant..	VA	LOCALITY N715n : Skinner Ranch Formation	
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	C	<i>Antronaria voluminosa</i> Cooper and Grant .....	VR
<i>Eolyttonia progressa</i> Cooper and Grant .....	C	<i>Cartorhium zoyei</i> Cooper and Grant.....	VR
<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	C	<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Grandaurispina crassa</i> Cooper and Grant .....	C	<i>Meekella hessensis</i> R.E. King.....	VR
<i>Grandaurispina rara</i> Cooper and Grant .....	C	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Heteralosia hystricula</i> (Girty).....	VR	LOCALITY N715o : Skinner Ranch Formation, Sullivan Peak Member	
<i>Heterelasma concavum</i> Cooper and Grant.....	VR	<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR
<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	A	<i>Lepidospirifer</i> sp. ....	VR
<i>Kochiproductus</i> sp. ....	VR		

	Rarity code		Rarity code
LOCALITY N715p : Skinner Ranch Formation, Sullivan Peak Member		<i>Acosarina</i> sp. ....	VR
<i>Peniculauris</i> sp. 1 .....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
LOCALITY N715q : Hess Formation		<i>Acritosia solida</i> Cooper and Grant .....	VR
<i>Peniculauris imitata</i> Cooper and Grant.....	VR	<i>Antronaria speciosa</i> Cooper and Grant .....	R
LOCALITY N715u : Skinner Ranch Formation, Sullivan Peak Member		<i>Antronaria transversa</i> (R.E. King) .....	C
<i>Derbyia</i> sp. ....	VR	<i>Chonetinella biplicata</i> (R.E. King).....	VR
<i>Enteleles</i> sp. ....	R	<i>Composita apsidata</i> Cooper and Grant.....	R
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Enteleles subcircularis</i> Cooper and Grant .....	C
LOCALITY N715v : Skinner Ranch Formation, Decie Ranch Member		<i>Eolyttonia</i> sp. ....	R
<i>Acosarina dorsisulcata</i> Cooper and Grant.....	C	<i>Hustedia</i> sp. ....	VR
<i>Acritosia teguliferoides</i> (R.E. King).....	VR	<i>Limbella</i> sp. 1 .....	R
<i>Altiplexus glebosus</i> Cooper and Grant.....	VR	<i>Linoproductus undatus</i> Cooper and Grant .....	C
<i>Antiquatonia hessensis</i> (R.E. King) .....	VR	<i>Meekella hessensis</i> R.E. King.....	VR
<i>Antronaria dissona</i> Cooper and Grant.....	R	<i>Oncosarina</i> sp. ....	VR
<i>Antronaria transversa</i> (R.E. King) .....	VR	<i>Oncosarina whitei</i> (R.E. King).....	C
<i>Chonetinella</i> sp. 4 .....	VR	<i>Peniculauris imitata</i> Cooper and Grant.....	C
<i>Collemataria platys</i> Cooper and Grant.....	VR	<i>Rhipidomella hessensis</i> R.E. King.....	C
<i>Composita</i> sp. ....	VR	<i>Thamnosia silicica</i> Cooper and Grant .....	R
<i>Crenispirifer angulatus</i> (R.E. King).....	R	<i>Tschernyschewia inexpectans</i> Cooper and Grant.....	R
<i>Derbyia crenulata</i> Girty .....	VR	LOCALITY N716o : Hess Formation, Taylor Ranch Member	
<i>Derbyia nasuta</i> Girty .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
<i>Dielasma hessense</i> Cooper and Grant .....	VR	<i>Antronaria speciosa</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	VR	<i>Antronaria transversa</i> (R.E. King) .....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	VR	<i>Composita</i> sp. ....	VR
<i>Elliottella varicostata</i> Cooper and Grant.....	VR	<i>Compressoproductus concentricus</i> Cooper and Grant.....	VR
<i>Enteleles stehlii</i> Cooper and Grant .....	R	<i>Dielasma longisulcatum</i> Cooper and Grant.....	VR
<i>Hustedia catella</i> Cooper and Grant .....	C	<i>Echinauris</i> sp. ....	VR
<i>Hustedia hessensis</i> R.E. King.....	R	<i>Enteleles subcircularis</i> Cooper and Grant .....	R
<i>Hustedia</i> sp. ....	R	<i>Eolyttonia</i> sp. ....	R
<i>Hystriculina pumila</i> Cooper and Grant.....	R	<i>Limbella</i> sp. 1 .....	R
<i>Kozlowskia</i> sp. ....	R	<i>Linoproductus undatus</i> Cooper and Grant .....	R
<i>Lepidocrania</i> sp. ....	VR	<i>Oncosarina whitei</i> (R.E. King) .....	C
<i>Meekella hessensis</i> R.E. King.....	R	<i>Peniculauris imitata</i> Cooper and Grant.....	C
<i>Metriolepis scrupea</i> Cooper and Grant.....	VR	<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Orthotichia newelli</i> Cooper and Grant.....	R	<i>Rugaria hessensis</i> (R.E. King).....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	R	<i>Stenoscisma pyraustoides</i> Cooper and Grant.....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Thamnosia silicica</i> Cooper and Grant .....	R
<i>Stenoscisma hadrum</i> Cooper and Grant.....	R	<i>Tschernyschewia inexpectans</i> Cooper and Grant.....	VR
<i>Stenoscisma</i> sp. ....	VR	LOCALITY N716p : Skinner Ranch Formation, Decie Ranch Member	
<i>Teguliferina conida</i> (Stehli) .....	R	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
<i>Tricoria hirpex</i> Cooper and Grant.....	VR	<i>Antronaria titania</i> Cooper and Grant.....	VR
<i>Tropidelasma rhamphodes</i> Cooper and Grant .....	VR	<i>Cartorhium zoyei</i> Cooper and Grant.....	VR
LOCALITY N715z : Gaptank Formation		<i>Composita apheles</i> Cooper and Grant .....	VR
<i>Hystriculina sulcata</i> Cooper and Grant.....	R	<i>Elliottella varicostata</i> Cooper and Grant.....	VR
<i>Kochiproductus primitivus</i> Cooper and Grant .....	VR	<i>Eolyttonia</i> sp. ....	VR
<i>Linoproductus</i> sp. ....	VR	<i>Kozlowskia kingi</i> Stehli.....	VR
LOCALITY N716a : Hess Formation		<i>Kozlowskia subsphaeroidalis</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	VR	<i>Limbella limbata</i> Cooper and Grant .....	VR
LOCALITY N716g : Hess Formation		<i>Linoproductus angustus</i> R.E. King .....	VR
<i>Composita</i> sp. ....	VR	<i>Martinia</i> sp. ....	VR
<i>Meekella</i> sp. ....	VR	<i>Neophricadothyris catatona</i> Cooper and Grant .....	R
LOCALITY N716k : Gaptank Formation		<i>Neophricadothyris</i> sp. ....	VR
<i>Scacchinella primitiva</i> Cooper and Grant.....	VR	<i>Rhamnaria grandis</i> Cooper and Grant.....	VR
LOCALITY N716n : Hess Formation, Taylor Ranch Member		<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Stenoscisma pyraustoides</i> Cooper and Grant.....	VR
		LOCALITY N716q : Skinner Ranch Formation	
		<i>Composita discina</i> Cooper and Grant.....	VR
		<i>Scacchinella titan</i> Cooper and Grant .....	C
		<i>Stenoscisma myioides</i> Cooper and Grant .....	R

	Rarity code		Rarity code
LOCALITY N716r : Lenox Hills Formation			
<i>Acosarina</i> sp. ....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Composita discina</i> Cooper and Grant.....	VR	<i>Metriolepis ziczac</i> Cooper and Grant .....	VR
<i>Enteleles wolfcampensis</i> R.E. King .....	VR	<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	R
<i>Gypospirifer anancites</i> Cooper and Grant .....	VR	<i>Neospirifer bakeri bakeri</i> R.E. King .....	R
<i>Hustedia trita trita</i> Cooper and Grant.....	R	<i>Neospirifer thescelus</i> Cooper and Grant.....	VR
<i>Hystriculina sulcata</i> Cooper and Grant.....	VR	<i>Paraspiriferina pulchra</i> Cooper and Grant .....	VR
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	VR
<i>Nudauris convexa</i> Cooper and Grant.....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant.....	R
<i>Parenteleles superbus</i> Cooper and Grant.....	VR	<i>Reticulariina craticula</i> Cooper and Grant .....	C
<i>Rhipidomella miscella</i> Cooper and Grant.....	VR	<i>Reticulariina senticosa</i> Cooper and Grant.....	VR
<i>Stenoscisma</i> sp. 2 .....	R	<i>Reticulariina</i> sp. ....	C
<i>Sulcataria</i> sp. 2 .....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR
<i>Teguliferina boesei</i> R.E. King .....	VR	<i>Spinarella paulula</i> Cooper and Grant.....	VR
LOCALITY N716t : Skinner Ranch Formation			
<i>Derbyia nasuta</i> Girty .....	VR	<i>Stenoscisma aptatum</i> Cooper and Grant.....	VR
<i>Meekella enormis</i> Cooper and Grant.....	VR	<i>Stenoscisma camurum</i> Cooper and Grant.....	VR
<i>Meekella hessensis</i> R.E. King.....	VR	<i>Stenoscisma triquetrum</i> Cooper and Grant .....	R
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Xenosteges magnus</i> Cooper and Grant.....	VR
LOCALITY N716v : Word Formation, Appel Ranch Member			
<i>Composita enormis</i> Cooper and Grant .....	R	LOCALITY N716xa : Road Canyon Formation	
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	R	<i>Cactosteges anomalus</i> Cooper and Grant.....	R
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Collemataria</i> sp. ....	R
<i>Dielasma zebratum</i> Cooper and Grant.....	VR	<i>Composita crassa</i> Cooper and Grant.....	R
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	R	<i>Cooperina subcuneata</i> Cooper and Grant.....	VR
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR	<i>Costispinifera rugatula</i> (Girty) .....	C
<i>Eolytonia progressa</i> Cooper and Grant .....	R	<i>Crurithyris</i> sp. ....	VR
<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	VR	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	C
<i>Meekella skenoides</i> Girty .....	VR	<i>Derbyia cincinnata</i> Cooper and Grant .....	R
<i>Neospirifer amphigyus</i> Cooper and Grant.....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	VR
<i>Paraspiriferina rotundata</i> Cooper and Grant.....	VR	<i>Dielasma zebratum</i> Cooper and Grant.....	R
<i>Paucispinifera quadrata</i> Cooper and Grant .....	R	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR
<i>Reticulariina cerina</i> Cooper and Grant .....	R	<i>Echinauris</i> sp. ....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR
<i>Spiriferella propria</i> Cooper and Grant.....	VR	<i>Heteralosia hystricula</i> (Girty).....	VR
<i>Stenoscisma renode</i> Cooper and Grant.....	VR	<i>Heterelasma solidum</i> Cooper and Grant .....	VR
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR	<i>Hustedia consuta</i> Cooper and Grant .....	C
LOCALITY N716x : Road Canyon Formation			
<i>Acosarina mesoplatys</i> (R.E. King) .....	C	<i>Hustedia sculptilis</i> Cooper and Grant.....	R
<i>Anteridocus erugatus</i> Cooper and Grant.....	C	<i>Liosotella wordensis</i> (R.E. King).....	C
<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR	<i>Meekella skenoides</i> Girty .....	C
<i>Chondronia ovalis</i> Cooper and Grant.....	C	<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	C
<i>Collemataria</i> sp. ....	VR	<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR
<i>Composita crassa</i> Cooper and Grant.....	C	<i>Paraspiriferina</i> sp. ....	C
<i>Composita</i> sp. ....	VR	<i>Paucispinifera transversa</i> Cooper and Grant .....	VR
<i>Composita stalagmium</i> Cooper and Grant .....	VR	<i>Ptygmactrum depressum</i> Cooper and Grant.....	VR
<i>Coscinophora magnifica</i> Cooper and Grant.....	C	<i>Reticulariina senticosa</i> Cooper and Grant.....	VR
<i>Crenispirifer</i> sp. ....	R	<i>Reticulariina</i> sp. ....	VR
<i>Cyclacantharia paucispinosa</i> Cooper and Grant.....	C	<i>Rhamnaria kingorum delicata</i> Muir-Wood and Cooper .....	VR
<i>Derbyia filosa</i> Cooper and Grant .....	VR	<i>Texarina elongata</i> Cooper and Grant.....	VR
<i>Derbyia laqueata</i> Cooper and Grant .....	VR	<i>Xenosteges trivialis</i> Cooper and Grant .....	VR
<i>Derbyia texta</i> Cooper and Grant.....	VR	<i>Yakovlevia sulcata</i> Cooper and Grant.....	VR
<i>Dielasma</i> sp. ....	VR	LOCALITY N716z : Road Canyon Formation	
<i>Dyoros (Tetragonetes) rectangulatus</i> Cooper and Grant....	VR	<i>Composita crassa</i> Cooper and Grant.....	VR
<i>Echinauris parva</i> Cooper and Grant .....	R	<i>Edriosteges compactus</i> Cooper and Grant .....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R	<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	VR
<i>Enteleles subnudus</i> Cooper and Grant .....	R	<i>Taphrosetria peculiaris</i> Cooper and Grant .....	VR
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR	LOCALITY N717a : Skinner Ranch Formation, Sullivan Peak Member	
<i>Liosotella costata</i> Cooper and Grant.....	R	<i>Antronaria dissona</i> Cooper and Grant.....	VR
<i>Meekella calathica</i> Cooper and Grant.....	C	<i>Compressoproducitus parvus</i> Cooper and Grant.....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	<i>Enteleles</i> sp. ....	VR
		LOCALITY N717e : Cathedral Mountain Formation, Wedin Member	
		<i>Acosarina mesoplatys</i> (R.E. King).....	VR
		<i>Agelesia triangularis</i> (R.E. King) .....	C



	Rarity code		Rarity code
LOCALITY N717e - Continued		LOCALITY N718z : Skinner Ranch Formation, Sullivan Peak Member	
<i>Cartorhium coristum</i> Cooper and Grant .....	VR	<i>Chonosteges variabilis</i> Cooper and Grant .....	VR
<i>Cartorhium latum</i> (R.E. King) .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	VR
<i>Choanodus irregularis</i> Cooper and Grant .....	VR	<i>Hercosia uddeni</i> (Böse) .....	VR
<i>Chondronia bella</i> Cooper and Grant .....	VR	LOCALITY N719 : Hueco Formation	
<i>Chonosteges pulcher</i> Cooper and Grant .....	C	<i>Composita cracens</i> Cooper and Grant .....	VR
<i>Collemataria irregularis</i> Cooper and Grant .....	R	<i>Dasysaria undulata</i> Cooper and Grant .....	C
<i>Composita bucculenta</i> Cooper and Grant .....	VR	LOCALITY N719a : Neal Ranch Formation	
<i>Compressoproducetus thomasi</i> Cooper and Grant .....	VR	<i>Reticulatia huecoensis</i> (R.E. King) .....	VR
<i>Derbyia complicata</i> Cooper and Grant .....	R	LOCALITY N719e : Word Formation	
<i>Derbyia laqueata</i> Cooper and Grant .....	VR	<i>Crurithyris tholiaphor</i> Cooper and Grant .....	R
<i>Diplanus lamellatus</i> (R.E. King) .....	C	LOCALITY N719q : Hess Formation	
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	VR	<i>Antiquatonia hessensis</i> (R.E. King) .....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	R	<i>Cancrinella</i> sp. ....	VR
<i>Enteleter plummeri</i> R.E. King .....	C	<i>Composita</i> sp. ....	R
<i>Hercosia uddeni</i> (Böse) .....	R	<i>Fimbrinia</i> sp. ....	VR
<i>Hustedia spicata</i> Cooper and Grant .....	C	<i>Hustedia</i> sp. ....	VR
<i>Institella leonardensis</i> (R.E. King) .....	R	<i>Hystriulina sulcata</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	C	<i>Kochiproductus</i> sp. ....	VR
<i>Metriolepis larina</i> Cooper and Grant .....	R	<i>Kutorginella</i> sp. ....	R
<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR	<i>Martinia cruenta</i> Cooper and Grant .....	C
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	<i>Neospirifer</i> sp. ....	R
<i>Rhipidomella hispidula</i> Cooper and Grant .....	C	<i>Reticulatia</i> sp. ....	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR	<i>Rhynchopora</i> sp. ....	VR
LOCALITY N717g : Cathedral Mountain Formation		<i>Stenoscisma cf. bellatulum</i> Cooper and Grant .....	R
<i>Dyoros (Tetragonetes) planus</i> Cooper and Grant .....	VR	<i>Stenoscisma aff. multcostum</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	VR	LOCALITY N719r : Lenox Hills Formation	
<i>Megousia umbonata</i> Cooper and Grant .....	R	<i>Hystriulina ventroplana</i> Cooper and Grant .....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	R	LOCALITY N719s : Skinner Ranch Formation, Decie Ranch Member	
LOCALITY N717i : Skinner Ranch Formation, Decie Ranch Member		<i>Reticulatia</i> sp. ....	VR
<i>Enteleter rotundobesus</i> Cooper and Grant .....	VR	LOCALITY N719w : Road Canyon Formation	
LOCALITY N717v : Skinner Ranch Formation		<i>Geyerella inexpectata</i> Cooper and Grant .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Neospirifer thescelus</i> Cooper and Grant .....	VR
LOCALITY N718d : Word Formation, Willis Ranch Member		LOCALITY N719x : Road Canyon Formation	
<i>Cactosteges anomalus</i> Cooper and Grant .....	VR	<i>Acanthocrania densispina</i> Cooper and Grant .....	VR
<i>Collemataria elongata</i> Cooper and Grant .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	A
<i>Costispinifera costata</i> (R.E. King) .....	R	<i>Anteridocus erugatus</i> Cooper and Grant .....	C
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Cenorhynchia atmata</i> Cooper and Grant .....	R
<i>Derbyia</i> sp. ....	VR	<i>?Cenorhynchia mitigata</i> Cooper and Grant .....	VR
<i>Dielasma compactum</i> Cooper and Grant .....	R	<i>Cenorhynchia saginata</i> Cooper and Grant .....	R
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	VR	<i>Composita crassa</i> Cooper and Grant .....	VA
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR	<i>Composita stalagmium</i> Cooper and Grant .....	VA
<i>Enteleter wordensis</i> R.E. King .....	VR	<i>Crurithyris minutalis</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	R	<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	VA
<i>Meekella skenoides</i> Girty .....	R	<i>Derbyia cincinnata</i> Cooper and Grant .....	C
<i>Megousia definita</i> Cooper and Grant .....	VR	<i>Derbyia complicata</i> Cooper and Grant .....	VR
<i>Paraspiriferina setulosa</i> Cooper and Grant .....	R	<i>Derbyia laqueata</i> Cooper and Grant .....	C
<i>Reticulariina senticosa</i> Cooper and Grant .....	VR	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	C
<i>Spiriferellina hilli</i> (Girty) .....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	C
<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
LOCALITY N718e : Neal Ranch Formation		<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C
<i>Poikilosakos petaloides</i> Cooper and Grant .....	VR	<i>Elassonia micraria</i> Cooper and Grant .....	C
LOCALITY N718v : Skinner Ranch Formation, Poplar Tank Member		<i>Eolyttonia chaotica</i> Cooper and Grant .....	A
<i>Antronaria voluminosa</i> Cooper and Grant .....	VR	<i>Hercosestria cribrosa</i> Cooper and Grant .....	VA
<i>Diplanus lamellatus</i> (R.E. King) .....	VR	<i>Holotricharina sparsa</i> Cooper and Grant .....	VR
LOCALITY N718y : Lenox Hills Formation		<i>Hustedia connorsii</i> Cooper and Grant .....	C
<i>Composita strongyle</i> Cooper and Grant .....	R	<i>Hustedia consuta</i> Cooper and Grant .....	VR
		<i>Hustedia cuneata</i> Cooper and Grant .....	C

	Rarity code		Rarity code
LOCALITY N719x - Continued		<i>Dielasma zebratum</i> Cooper and Grant.....	R
<i>Hustedia narinosa</i> Cooper and Grant.....	VA	<i>Divaricosta vagabunda</i> Cooper and Grant.....	VR
<i>Hustedia pugilla nasiterna</i> Cooper and Grant.....	VR	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant.....	A
<i>Hustedia</i> sp. ....	R	<i>Dyoros (Lissosia) parvus</i> Cooper and Grant.....	R
<i>Kutorginella robusta</i> Cooper and Grant.....	C	<i>Dyoros (Tetragonetes) quadrangulatus</i> Cooper and Grant..	C
<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR
<i>Meekella calathica</i> Cooper and Grant.....	A	<i>Eolyttonia progressa</i> Cooper and Grant.....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	C	<i>Glossothyropsis rectangulata</i> Cooper and Grant.....	C
<i>Metriolepis tegulata</i> Cooper and Grant.....	VR	<i>Grandaurispina crassa</i> Cooper and Grant.....	C
<i>Neophricadothyris bullata</i> Cooper and Grant.....	R	<i>Grandaurispina rara</i> Cooper and Grant.....	C
<i>Neophricadothyris crassibacca</i> Cooper and Grant.....	A	<i>Grandaurispina</i> sp. ....	VR
<i>Neospirifer bakeri bakeri</i> R.E. King.....	R	<i>Heteralosia hystricula</i> (Girty).....	VR
<i>Neospirifer thescelus</i> Cooper and Grant.....	C	<i>Heterelasma concavum</i> Cooper and Grant.....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant.....	C	<i>Heterelasma pentagonum</i> Cooper and Grant.....	VR
<i>Peniculauris costata</i> Cooper and Grant.....	VR	<i>Hustedia pugilla hebetata</i> Cooper and Grant.....	A
<i>Peniculauris transversa</i> Cooper and Grant.....	VR	<i>Hustedia</i> sp. ....	VR
<i>Pontisia stehlii stehlii</i> Cooper and Grant.....	C	<i>Leiorhynchoidea scelestia</i> Cooper and Grant.....	A
<i>Pontisia stehlii tumidosa</i> Cooper and Grant.....	R	<i>Leurosina marginata</i> Cooper and Grant.....	VA
<i>Reticulariina craticula</i> Cooper and Grant.....	A	<i>Liosotella irregularis</i> Cooper and Grant.....	A
<i>Reticulariina</i> sp. ....	VR	<i>Liosotella wordensis</i> (R.E. King).....	VR
<i>Reticulariina venustula</i> Cooper and Grant.....	R	<i>Meekella skenoides</i> Girty.....	A
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	C	<i>Megousia definita</i> Cooper and Grant.....	C
<i>Rhamnaria vinnula</i> Cooper and Grant.....	VR	<i>Neophricadothyris conara</i> Cooper and Grant.....	VR
<i>Rhynchopora hebetata</i> Cooper and Grant.....	VR	<i>Paraspiriferina rotundata</i> Cooper and Grant.....	C
<i>Rugatia incurvata</i> (R.E. King).....	VR	<i>Paraspiriferina</i> sp. ....	VR
<i>Spinarella lobata</i> Cooper and Grant.....	R	<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	R
<i>Spinarella paulula</i> Cooper and Grant.....	R	<i>Paucispinifera</i> sp. ....	VR
<i>Spiriferellina tricola</i> Cooper and Grant.....	R	<i>Phrenophoria bicostata</i> Cooper and Grant.....	C
<i>Stenoscisma calvatum</i> Cooper and Grant.....	VR	<i>Phrenophoria subcarinata</i> Cooper and Grant.....	C
<i>Stenoscisma camurum</i> Cooper and Grant.....	R	<i>Plectelasma dubium</i> Cooper and Grant.....	R
<i>Stenoscisma triquetrum</i> Cooper and Grant.....	A	<i>Pseudodielasma globulum</i> Cooper and Grant.....	C
<i>Texarina wordensis</i> (R.E. King).....	C	<i>Pseudodielasma ovatum</i> Cooper and Grant.....	A
<i>Tschernyschewia</i> sp. ....	VR	<i>Pseudodielasma</i> sp. ....	A
<i>Xenosteges magnus</i> Cooper and Grant.....	C	<i>Pseudoleptodus lepidus</i> Cooper and Grant.....	VR
LOCALITY N719y : Skinner Ranch Formation		<i>Reticulariina cerina</i> Cooper and Grant.....	C
<i>Antiquatonia hessensis</i> (R.E. King).....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Antronaria titania</i> Cooper and Grant.....	VR	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper.....	C
<i>Composita apheles</i> Cooper and Grant.....	VR	<i>Rhynchopora tenera</i> Cooper and Grant.....	VR
<i>Hystriculina pumila</i> Cooper and Grant.....	R	<i>Spiriferella clypeata</i> Cooper and Grant.....	C
<i>Kozlowskia subphaeroidalis</i> Cooper and Grant.....	R	<i>Spiriferella propria</i> Cooper and Grant.....	R
<i>Nudauris enigmatica</i> Cooper and Grant.....	VR	<i>Spiriferellina paucicostata</i> Cooper and Grant.....	VR
<i>Scacchinella titan</i> Cooper and Grant.....	VR	<i>Stenoscisma renode</i> Cooper and Grant.....	VR
<i>Stenoscisma problematicum</i> Cooper and Grant.....	VR	<i>Tautosia transenna</i> Cooper and Grant.....	VR
LOCALITY N719z : Word Formation, Appel Ranch		<i>Texarina elongata</i> Cooper and Grant.....	VR
Member		<i>Thamnusia phragmophora</i> Cooper and Grant.....	VR
<i>Allorhynchus permianum wordense</i> Cooper and Grant.....	VR	<i>Waagenoconcha magnifica</i> Cooper and Grant.....	R
<i>Bothrionia transversa</i> Cooper and Grant.....	C	<i>Wellerella girtyi girtyi</i> Cooper and Grant.....	C
<i>Cancrinella distorta</i> Cooper and Grant.....	VR	<i>Xenosteges quadratus</i> Cooper and Grant.....	R
<i>Cancrinella subquadrata</i> Cooper and Grant.....	VR	<i>Yakovlevia indentata</i> Cooper and Grant.....	C
<i>Cartorhium chelomatium</i> Cooper and Grant.....	R	LOCALITY N720a : Hueco Formation	
<i>Cartorhium retusum</i> Cooper and Grant.....	R	<i>Composita cracens</i> Cooper and Grant.....	R
<i>Composita enormis</i> Cooper and Grant.....	C	<i>Dasysaria undulata</i> Cooper and Grant.....	R
<i>Composita parasulcata</i> Cooper and Grant.....	R	LOCALITY N720b : Hueco Formation	
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud.....	VR	<i>Chondronia obesa</i> Cooper and Grant.....	C
<i>Crurithyris major</i> Cooper and Grant.....	C	<i>Composita cracens</i> Cooper and Grant.....	C
<i>Ctenalosia fixata</i> Cooper and Stehli.....	C	<i>Crurithyris</i> sp. ....	VR
<i>Ctenalosia</i> sp. ....	R	<i>Derbyia</i> sp. ....	R
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	A	<i>Hustedia</i> sp. ....	VR
<i>Derbyia filosa</i> Cooper and Grant.....	VR	<i>Kozlowskia</i> sp. ....	R
<i>Derbyia pannucia</i> Cooper and Grant.....	R	<i>Kutorginella</i> sp. ....	VR
<i>Derbyia</i> sp. ....	VR	<i>Micraphelia</i> sp. ....	C
<i>Derbyia texta</i> Cooper and Grant.....	C	<i>Neophricadothyris</i> sp. ....	VR
<i>Dielasma compactum</i> Cooper and Grant.....	R	<i>Pontisia franklinensis</i> Cooper and Grant.....	C
		<i>Reticulariina hueconiana</i> Cooper and Grant.....	VR

	Rarity code		Rarity code
LOCALITY N720b - Continued			
<i>Stenosisma</i> sp. 1 .....	R	<i>Paraspiriferina pulchra</i> Cooper and Grant .....	R
LOCALITY N720c : Hueco Formation			
<i>Composita cracens</i> Cooper and Grant .....	C	<i>Paucispinifera costellata</i> Cooper and Grant .....	VR
<i>Dasyaria undulata</i> Cooper and Grant .....	C	<i>Paucispinifera sulcata</i> Cooper and Grant .....	R
<i>Derbyia</i> sp. ....	R	<i>Peniculauris costata</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	VR	<i>Petasmaia</i> sp. 1 .....	VR
<i>Kozlowskia</i> sp. ....	VR	<i>Petasmatherus nitidus</i> Cooper and Grant .....	A
<i>Kutorginella</i> sp. ....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	R
<i>Nudauris</i> sp. ....	VR	<i>Ptygmactrum acutum</i> Cooper and Grant .....	VR
LOCALITY N720d : Road Canyon Formation			
<i>Acanthocrania densispina</i> Cooper and Grant .....	VR	<i>Rhamnaria</i> sp. ....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	A	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	C
<i>Altiplecus</i> sp. 2 .....	VR	<i>Rhamnaria vinnula</i> Cooper and Grant .....	C
<i>Bothrostegium derbyoideum</i> Cooper and Grant .....	C	<i>Rhynchopora hebetata</i> Cooper and Grant .....	R
<i>Cactosteges anomalus</i> Cooper and Grant .....	R	<i>Rhytisia rugosa</i> Cooper and Grant .....	C
<i>Cartorhium</i> sp. ....	VR	<i>Simplicarina incompta</i> Cooper and Grant .....	R
<i>Chonetinetes angustisulcatus</i> Cooper and Grant .....	C	<i>Spiriferinaella</i> sp. ....	VR
<i>Collemataria</i> sp. ....	C	<i>Stenosisma bonum</i> Cooper and Grant .....	VR
<i>Composita crassa</i> Cooper and Grant .....	C	<i>Stenosisma</i> sp. ....	VR
<i>Composita pilula</i> Cooper and Grant .....	A	<i>Texarina wordensis</i> (R.E. King) .....	VR
<i>Composita</i> sp. ....	R	<i>Thedusia mesocostata</i> Cooper and Grant .....	C
<i>Compressoproductus</i> sp. ....	VR	<i>Tropidelasma corniculum</i> Cooper and Grant .....	A
<i>Cooperina subcuneata</i> Cooper and Grant .....	VR	<i>Waagenoconcha convexa</i> Cooper and Grant .....	VR
<i>Coscinophora magnifica</i> Cooper and Grant .....	VR	<i>Xenosteges trivialis</i> Cooper and Grant .....	C
<i>Cyclacantharia transitoria</i> Cooper and Grant .....	R	LOCALITY N720e : Skinner Ranch Formation	
<i>Derbyia cincinnata</i> Cooper and Grant .....	R	<i>Acolosia? exasperata</i> Cooper and Grant .....	VR
<i>Derbyia laqueata</i> Cooper and Grant .....	C	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	SA
<i>Derbyia</i> sp. ....	R	<i>Acritosia teguliferoides</i> (R.E. King) .....	VR
<i>Dielasma bellulum</i> Cooper and Grant .....	R	<i>Altiplecus glebosus</i> Cooper and Grant .....	C
<i>Dielasma</i> sp. ....	R	<i>Anomalesia perplexa</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>angulatus</i> Cooper and Grant .....	R	<i>Antiquatonia hessensis</i> (R.E. King) .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensiformis</i> Cooper and Grant .....	VR	<i>Antronaria dissona</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>transversus</i> Cooper and Grant .....	C	<i>Antronaria titania</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Lissosia</i> ) <i>parvus</i> Cooper and Grant .....	C	<i>Cancrinella sparsispinosa</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>rectangulatus</i> Cooper and Grant .....	R	<i>Chonetinella biplicata</i> (R.E. King) .....	C
<i>Echinauris bella</i> Cooper and Grant .....	VR	<i>Collemataria marshalli</i> (Stehli) .....	VR
<i>Echinauris lappacea</i> Cooper and Grant .....	R	<i>Composita apheles</i> Cooper and Grant .....	A
<i>Echinauris</i> sp. ....	C	<i>Composita discina</i> Cooper and Grant .....	VR
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR	<i>Crenispirifer angulatus</i> (R.E. King) .....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR	<i>Crurithyris</i> sp. ....	VR
<i>Elassonia micraria</i> Cooper and Grant .....	VR	<i>Cyclacantharia gigantea</i> Cooper and Grant .....	C
<i>Enteleles subnudus</i> Cooper and Grant .....	A	<i>Cyclacantharia</i> sp. 1 .....	C
<i>Geyerella inexpectata</i> Cooper and Grant .....	C	<i>Derbyia crenulata</i> Girty .....	C
<i>Goniarina</i> sp. ....	VR	<i>Derbyia nasuta</i> Girty .....	A
<i>Goniarina striata</i> Cooper and Grant .....	C	<i>Dielasma hessense</i> Cooper and Grant .....	VR
<i>Heterelasma glansfagea</i> Cooper and Grant .....	R	<i>Dielasma</i> sp. 1 .....	C
<i>Heterelasma</i> sp. ....	R	<i>Elliottella varicostata</i> Cooper and Grant .....	C
<i>Holotricharina sparsa</i> Cooper and Grant .....	VR	<i>Enteleles stehlii</i> Cooper and Grant .....	C
<i>Hustedia consuta</i> Cooper and Grant .....	A	<i>Eolyttonia cornucopia</i> Cooper and Grant .....	C
<i>Leiorhynchoidea</i> sp. ....	VR	<i>Eolyttonia gigantea</i> Cooper and Grant .....	C
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Fimbrinia ovata</i> Cooper and Grant .....	R
<i>Lowenstamia</i> sp. ....	VR	<i>Goniarina magniextensa</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	C	<i>Gypospirifer infraplicus</i> (R.E. King) .....	R
<i>Meekella</i> sp. ....	R	<i>Hercosia uddeni</i> (Böse) .....	R
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	C	<i>Heterelasma</i> sp. 2 .....	VR
<i>Metriolepis ziczac</i> Cooper and Grant .....	R	<i>Hustedia catella</i> Cooper and Grant .....	A
<i>Micraphelia</i> sp. ....	R	<i>Hustedia hessensis</i> R.E. King .....	C
<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	VR	<i>Isogramma</i> sp. ....	VR
<i>Neospirifer bakeri bakeri</i> R.E. King .....	R	<i>Kochiproductus</i> sp. ....	VR
<i>Neospirifer formulosus</i> Cooper and Grant .....	C	<i>Kozlowskia alata</i> Cooper and Grant .....	C
<i>Notothyris gillilandensis</i> Cooper and Grant .....	R	<i>Leurosina vulgarica</i> Cooper and Grant .....	R
<i>Ombonia invecta</i> Cooper and Grant .....	C	<i>Linoproductus angustus</i> R.E. King .....	VR
<i>Paraspiriferina cellulana</i> Cooper and Grant .....	VR	<i>Martinia</i> sp. 2 .....	VR
		<i>Meekella caperata</i> Cooper and Grant .....	R
		<i>Meekella enormis</i> Cooper and Grant .....	A
		<i>Meekella hessensis</i> R.E. King .....	VR

	Rarity code		Rarity code
LOCALITY N720e - Continued		LOCALITY N721g : Neal Ranch Formation	
<i>Metriolepis scrupea</i> Cooper and Grant.....	R	<i>Acanthocrania</i> sp. ....	VR
<i>Neophricadothyris catatona</i> Cooper and Grant.....	C	<i>Atelestegastus marginatus</i> Cooper and Grant.....	C
<i>Nudauris enigmatica</i> Cooper and Grant.....	R	<i>Beecheria elliptica</i> Cooper and Grant.....	VR
<i>Orthotichia newelli</i> Cooper and Grant.....	A	<i>Cenorhynchia hebata</i> Cooper and Grant.....	C
<i>Pontisia nanas</i> (Stehli).....	VR	<i>Cleiothyridina rectimarginata</i> Cooper and Grant.....	VR
<i>Reticulariina pusilla</i> Cooper and Grant.....	VR	<i>Composita strongyle</i> Cooper and Grant.....	C
<i>Reticulariina tetrica</i> Cooper and Grant.....	C	<i>Cooperina triangulata</i> Cooper and Grant.....	A
<i>Rhipidomella hessensis</i> R.E. King.....	C	<i>Crurithyris tumibilis</i> Cooper and Grant.....	A
<i>Scacchinella titan</i> Cooper and Grant.....	VA	<i>Ctenalosia primitiva</i> Cooper and Grant.....	VR
<i>Stenoscisma myioides</i> Cooper and Grant.....	VR	<i>Derbyia carteri</i> Cooper and Grant.....	C
<i>Stenoscisma pyraustoides</i> Cooper and Grant.....	R	<i>Derbyia profunda</i> Cooper and Grant.....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Diplanus catatonus</i> Cooper and Grant.....	A
<i>Teguliferina conida</i> (Stehli).....	C	<i>Echinauris interrupta</i> Cooper and Grant.....	C
<i>Thamnosia parvispinosa</i> (Stehli).....	VR	<i>Enteleles wolfcampensis</i> R.E. King.....	A
<i>Tricoria hirpex</i> Cooper and Grant.....	R	<i>Eolyttonia fredericki</i> (R.E. King).....	VR
LOCALITY N720f : Skinner Ranch Formation		<i>Hustedia trita leptyca</i> Cooper and Grant.....	A
<i>Acritosia peculiaris</i> Cooper and Grant.....	VR	<i>Hystriculina minima</i> Cooper and Grant.....	R
<i>Chonosteges variabilis</i> Cooper and Grant.....	VR	<i>Kochiproductus</i> sp. 3.....	VR
<i>Derbyia crenulata</i> Girty.....	VR	<i>Lepidocrania sparsispinosa</i> Cooper and Grant.....	R
<i>Enteleles stehlii</i> Cooper and Grant.....	VR	<i>Meekella prionota</i> Cooper and Grant.....	C
<i>Eolyttonia</i> sp. ....	VR	<i>Neochonetes parvus</i> Cooper and Grant.....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant.....	R	<i>Neophricadothyris transversa</i> Cooper and Grant.....	VR
<i>Hustedia catella</i> Cooper and Grant.....	R	<i>Neospirifer apothescelus</i> Cooper and Grant.....	VR
<i>Hustedia hessensis</i> R.E. King.....	VR	<i>Orthotichia kozlowskii</i> R.E. King.....	C
<i>Meekella hessensis</i> R.E. King.....	R	<i>Pontisia kingi</i> Cooper and Grant.....	R
<i>Pontisia costata</i> Cooper and Grant.....	VR	<i>Pseudoleptodus conicus</i> Cooper and Grant.....	C
<i>Reticulariina pusilla</i> Cooper and Grant.....	VR	<i>Reticulariina strigosa</i> Cooper and Grant.....	R
<i>Rhipidomella hessensis</i> R.E. King.....	C	<i>Reticulatia robusta</i> Cooper and Grant.....	VR
<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR	<i>Rhipidomella miscella</i> Cooper and Grant.....	C
LOCALITY N720g : Skinner Ranch Formation		<i>Rhynchopora molina</i> Cooper and Grant.....	R
<i>Acanthocrania alta</i> Cooper and Grant.....	VR	<i>Stenoscisma</i> sp. ....	R
<i>Acosarina dorsisulcata</i> Cooper and Grant.....	C	<i>Striatifera linoproductiformis</i> Cooper and Grant.....	A
<i>Acritosia peculiaris</i> Cooper and Grant.....	R	<i>Teguliferina boesei</i> R.E. King.....	R
<i>Cartorhium zoyei</i> Cooper and Grant.....	VR	LOCALITY N721h : Gaptank Formation, Uddenites	
<i>Chonetinella biplicata</i> (R.E. King).....	C	Member	
<i>Composita apheles</i> Cooper and Grant.....	R	<i>Kutorginella uddeni</i> Cooper and Grant.....	VR
<i>Crenispirifer angulatus</i> (R.E. King).....	VR	LOCALITY N721i : Gaptank Formation, Uddenites	
<i>Derbyia crenulata</i> Girty.....	R	Member	
<i>Dielasma</i> sp. ....	VR	<i>Kutorginella uddeni</i> Cooper and Grant.....	VR
<i>Elliottella varicostata</i> Cooper and Grant.....	C	LOCALITY N721j : Road Canyon Formation	
<i>Enteleles stehlii</i> Cooper and Grant.....	R	<i>Acanthocrania densispina</i> Cooper and Grant.....	VR
<i>Eolyttonia</i> sp. ....	VR	<i>Acosarina mesoplatys</i> (R.E. King).....	A
<i>Hustedia hessensis</i> R.E. King.....	R	<i>Allorhynchus</i> sp. ....	VR
<i>Isogramma</i> sp. ....	VR	<i>Cactosteges anomalus</i> Cooper and Grant.....	VR
<i>Kozlowskia alata</i> Cooper and Grant.....	R	<i>Cartorhium</i> sp. ....	VR
<i>Leurosina vulgarica</i> Cooper and Grant.....	VR	<i>Cenorhynchia saginata</i> Cooper and Grant.....	R
<i>Linoproductus angustus</i> R.E. King.....	VR	<i>Chondronia ovalis</i> Cooper and Grant.....	R
<i>Meekella hessensis</i> R.E. King.....	C	<i>Chonetinetes angustisulcatus</i> Cooper and Grant.....	C
<i>Rhamnaria grandis</i> Cooper and Grant.....	VR	<i>Chonetinetes reversus</i> Cooper and Grant.....	VR
<i>Rhipidomella hessensis</i> R.E. King.....	VR	<i>Collemataria batilliformis</i> Cooper and Grant.....	VA
<i>Scacchinella titan</i> Cooper and Grant.....	R	<i>Collemataria</i> sp. ....	C
<i>Stenoscisma problematicum</i> Cooper and Grant.....	VR	<i>Composita crassa</i> Cooper and Grant.....	C
<i>Tricoria hirpex</i> Cooper and Grant.....	VR	<i>Composita enormis</i> Cooper and Grant.....	C
LOCALITY N720j : Skinner Ranch Formation		<i>Composita</i> sp. ....	R
<i>Cartorhium zoyei</i> Cooper and Grant.....	VR	<i>Compressoproductus</i> sp. 6.....	C
<i>Enteleles rotundobesus</i> Cooper and Grant.....	VR	<i>Cooperina subcuneata</i> Cooper and Grant.....	C
<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR	<i>Coscinophora magnifica</i> Cooper and Grant.....	C
LOCALITY N720z : Lenox Hills Formation		<i>Costispinifera rugatula</i> (Girty).....	C
<i>Kutorginella uddeni</i> Cooper and Grant.....	VR	<i>Crurithyris minutalis</i> Cooper and Grant.....	VR
LOCALITY N721f : Cathedral Mountain Formation		<i>Crurithyris</i> sp. ....	R
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR	<i>Cyclacantharia transitoria</i> Cooper and Grant.....	A
		<i>Derbyia cincinnata</i> Cooper and Grant.....	C

	Rarity code		Rarity code
LOCALITY N721j - Continued			
<i>Derbyia laqueata</i> Cooper and Grant .....	C	<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Dielasma bellulum</i> Cooper and Grant .....	R	<i>Theodusia mesocostata</i> Cooper and Grant .....	C
<i>Dielasma</i> sp. ....	VR	<i>Tropidelasma corniculum</i> Cooper and Grant .....	C
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>angulatus</i> Cooper and Grant .....	C	<i>Undulella matutina</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>transversus</i> Cooper and Grant .....	C	<i>Waagenoconcha convexa</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Lissosia</i> ) <i>concavus</i> Cooper and Grant .....	C	<i>Xenosteges magnus</i> Cooper and Grant .....	C
<i>Dyoros</i> ( <i>Lissosia</i> ) <i>parvus</i> Cooper and Grant .....	R	<i>Yakovlevia sulcata</i> Cooper and Grant .....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	C	LOCALITY N721k : Neal Ranch Formation	
<i>Echinauris lappacea</i> Cooper and Grant .....	A	<i>Linoproductus meniscus</i> Dunbar and Condra .....	VR
<i>Echinauris liumbona</i> Cooper and Grant .....	VR	LOCALITY N721-l : Gaptank Formation, Uddenites	
<i>Echinauris</i> sp. ....	C	Member	
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR	<i>Linoproductus meniscus</i> Dunbar and Condra .....	VR
<i>Edriosteges compactus</i> Cooper and Grant .....	R	LOCALITY N721m : Gaptank Formation, Uddenites	
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C	Member	
<i>Entelestes</i> sp. ....	R	<i>Kochiproductus primitivus</i> Cooper and Grant .....	VR
<i>Entelestes subnudus</i> Cooper and Grant .....	VR	LOCALITY N721n : Neal Ranch Formation	
<i>Eolyttonia chaotica</i> Cooper and Grant .....	VR	<i>Reticulatia americana</i> (Dunbar and Condra) .....	VR
? <i>Glossothyropsis superba</i> Cooper and Grant .....	VR	LOCALITY N721o : Road Canyon Formation	
<i>Goniarina striata</i> Cooper and Grant .....	R	<i>Acosarina mesoplatys</i> (R.E. King) .....	R
<i>Heteralosia hystricula</i> (Girty) .....	C	<i>Cenorhynchia atmata</i> Cooper and Grant .....	C
<i>Heterelasma glansfagea</i> Cooper and Grant .....	VR	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	R
<i>Heterelasma</i> sp. ....	R	<i>Composita crassa</i> Cooper and Grant .....	C
<i>Holotricharina sparsa</i> Cooper and Grant .....	VR	<i>Crurithyris minutalis</i> Cooper and Grant .....	R
<i>Hustedia connorsi</i> Cooper and Grant .....	A	<i>Derbyia cincinnata</i> Cooper and Grant .....	VR
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	R	<i>Derbyia informis</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	R	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	C
<i>Leiorhynchoidea</i> sp. ....	R	<i>Dielasma</i> sp. ....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensiformis</i> Cooper and Grant .....	VR
<i>Leurosina lata</i> Cooper and Grant .....	VR	<i>Echinauris bella</i> Cooper and Grant .....	R
<i>Leurosina</i> sp. ....	VR	<i>Echinauris lappacea</i> Cooper and Grant .....	R
<i>Liosotella costata</i> Cooper and Grant .....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR
<i>Liosotella wordensis</i> (R.E. King) .....	R	<i>Elassonia micraria</i> Cooper and Grant .....	C
<i>Meekella calathica</i> Cooper and Grant .....	VA	<i>Eolyttonia chaotica</i> Cooper and Grant .....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	C	<i>Hercosestria cribrata</i> Cooper and Grant .....	C
<i>Megousia mucronata</i> Cooper and Grant .....	R	<i>Heterelasma glansfagea</i> Cooper and Grant .....	C
<i>Metriolepis ziczac</i> Cooper and Grant .....	R	<i>Holotricharina hirsuta</i> Cooper and Grant .....	R
<i>Neophricadothyris crassibecca</i> Cooper and Grant .....	R	<i>Hustedia connorsi</i> Cooper and Grant .....	C
<i>Neospirifer bakeri bakeri</i> R.E. King .....	R	<i>Hustedia narinosa</i> Cooper and Grant .....	C
<i>Neospirifer formulosus</i> Cooper and Grant .....	VR	<i>Hustedia</i> sp. ....	C
<i>Paranorella</i> sp. 5 .....	VR	<i>Kutorginella robusta</i> Cooper and Grant .....	C
<i>Paraspiriferina pulchra</i> Cooper and Grant .....	R	<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR
<i>Paucispinifera parasulcata</i> Cooper and Grant .....	VR	<i>Meekella calathica</i> Cooper and Grant .....	R
<i>Paucispinifera</i> sp. ....	R	<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant .....	C	<i>Neophricadothyris crassibecca</i> Cooper and Grant .....	C
<i>Paucispinifera transversa</i> Cooper and Grant .....	VR	<i>Neospirifer thescelus</i> Cooper and Grant .....	R
<i>Peniculauris costata</i> Cooper and Grant .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	R
<i>Petasmatherus depressus</i> Cooper and Grant .....	VR	<i>Peniculauris transversa</i> Cooper and Grant .....	R
<i>Petasmatherus nitidus</i> Cooper and Grant .....	A	<i>Petrocrania</i> sp. ....	VR
<i>Petasmatherus pumilus</i> Cooper and Grant .....	R	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	A
<i>Phrenophoria</i> sp. 3 .....	VR	<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	VR
<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR	<i>Stenosisma bonum</i> Cooper and Grant .....	VR
<i>Ptygmactrum depressum</i> Cooper and Grant .....	VR	<i>Stenosisma triquetrum</i> Cooper and Grant .....	C
<i>Ptygmactrum extensum</i> Cooper and Grant .....	VR	<i>Texarina wordensis</i> (R.E. King) .....	C
<i>Reticulariina</i> sp. ....	VR	<i>Xenosteges magnus</i> Cooper and Grant .....	C
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	LOCALITY N721p : Word Formation, China Tank	
<i>Rhamnaria vinnula</i> Cooper and Grant .....	C	Member	
<i>Rhynchopora hebetata</i> Cooper and Grant .....	R	<i>Cactosteges anomalus</i> Cooper and Grant .....	VR
<i>Rhytisia rugosa</i> Cooper and Grant .....	C	<i>Dielasma compactum</i> Cooper and Grant .....	VR
<i>Simplicarina incompta</i> Cooper and Grant .....	R	<i>Dielasma planidorsatum</i> Cooper and Grant .....	VR
<i>Spiriferellina</i> sp. ....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensulo</i> Cooper and Grant .....	VR
<i>Spiriferellina tricola</i> Cooper and Grant .....	R	<i>Leiorhynchoidea amygdaloidea</i> Cooper and Grant .....	VR
<i>Stenosisma bonum</i> Cooper and Grant .....	R		
<i>Taphrosestria peculiaris</i> Cooper and Grant .....	VR		
<i>Texarina</i> sp. ....	VR		



	Rarity code		Rarity code
LOCALITY N721r : Road Canyon Formation		LOCALITY N721t : Road Canyon Formation	
<i>Acosarina mesoplatys</i> (R.E. King) .....	A	<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Anemonaria sublaevis</i> (R.E. King) .....	R	<i>Anteridocus seminudus</i> Cooper and Grant .....	VR
<i>Chonosteges costellatus</i> Cooper and Grant .....	R	<i>Bothrostegium derbyoideum</i> Cooper and Grant .....	R
<i>Composita crassa</i> Cooper and Grant .....	VR	<i>Cenorhynchia saginata</i> Cooper and Grant .....	C
<i>Cyclacantharia transitoria</i> Cooper and Grant .....	C	<i>Chondronia ovalis</i> Cooper and Grant .....	A
<i>Derbyia laqueata</i> Cooper and Grant .....	VR	<i>Composita crassa</i> Cooper and Grant .....	A
<i>Dyoros (Dyoros) extensiformis</i> Cooper and Grant .....	C	<i>Cooperina subcuneata</i> Cooper and Grant .....	VR
<i>Dyoros (Lissosia) parvus</i> Cooper and Grant .....	C	<i>Coscinophora magnifica</i> Cooper and Grant .....	A
<i>Dyoros (Tetragonetes) lateralis</i> Cooper and Grant .....	VR	<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	R
<i>Echinauris lappacea</i> Cooper and Grant .....	C	<i>Derbyia cincinnata</i> Cooper and Grant .....	A
<i>Echinauris</i> sp. ....	VR	<i>Derbyia informis</i> Cooper and Grant .....	C
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	R
<i>Holotricharina hirsuta</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Hustedia consuta</i> Cooper and Grant .....	R	<i>Echinauris</i> sp. ....	VR
<i>Kutorginella sullivanensis</i> (R.E. King) .....	VR	<i>Edriosteges compactus</i> Cooper and Grant .....	A
<i>Meekella calathica</i> Cooper and Grant .....	C	<i>Hercosestria cribrosa</i> Cooper and Grant .....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	A	<i>Heterelasma glansfagea</i> Cooper and Grant .....	R
<i>Micraphelia?</i> sp. ....	VR	<i>Hustedia connorsii</i> Cooper and Grant .....	R
<i>Neophricadothyris cordata</i> Cooper and Grant .....	VA	<i>Hustedia</i> sp. ....	R
<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	C	<i>Meekella calathica</i> Cooper and Grant .....	VA
<i>Neospirifer bakeri bakeri</i> R.E. King .....	C	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR	<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	R
<i>Neospirifer thescelus</i> Cooper and Grant .....	VR	<i>Neospirifer thescelus</i> Cooper and Grant .....	R
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	C
<i>Phrenophoria? nudumbona</i> Cooper and Grant .....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR
<i>Reticulariina venustula</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	<i>Reticulariina venustula</i> Cooper and Grant .....	C
<i>Rugatia occidentalis parvauris</i> (Newberry) .....	VR	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR
<i>Rugatia paraindica</i> (McKee) .....	VR	<i>Spiriferellina tricola</i> Cooper and Grant .....	VR
<i>Spinarella perfecta</i> Cooper and Grant .....	R	<i>Stenosisma bonum</i> Cooper and Grant .....	VR
<i>Waagenoconcha convexa</i> Cooper and Grant .....	R	<i>Stenosisma calvatum</i> Cooper and Grant .....	C
LOCALITY N721s : Road Canyon Formation		<i>Stenosisma</i> sp. ....	R
<i>Acosarina mesoplatys</i> (R.E. King) .....	C	<i>Taphrosestria peculiaris</i> Cooper and Grant .....	C
<i>Cenorhynchia parvula</i> Cooper and Grant .....	VR	<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Composita crassa</i> Cooper and Grant .....	A	<i>Tropidelasma corniculum</i> Cooper and Grant .....	VR
<i>Cooperina subcuneata</i> Cooper and Grant .....	VR	LOCALITY N721u : Cathedral Mountain Formation	
<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	R	<i>Acosarina mesoplatys</i> (R.E. King) .....	VA
<i>Derbyia cincinnata</i> Cooper and Grant .....	C	<i>Agelesia triangularis</i> (R.E. King) .....	R
<i>Dielasma ellipsoideum</i> Cooper and Grant .....	R	<i>Altiplecus</i> sp. ....	VR
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant .....	VR	<i>Anemonaria sublaevis</i> (R.E. King) .....	C
<i>Echinauris irregularis</i> Cooper and Grant .....	C	<i>Cancrinella</i> sp. ....	VR
<i>Echinauris</i> sp. ....	R	<i>Cenorhynchia</i> sp. ....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C	<i>Cenorhynchia unicastata</i> Cooper and Grant .....	R
<i>Eolyttonia chaotica</i> Cooper and Grant .....	C	<i>Choanodus anomalus</i> Cooper and Grant .....	VR
<i>Hercosestria cribrosa</i> Cooper and Grant .....	VA	<i>Choanodus irregularis</i> Cooper and Grant .....	C
<i>Heterelasma glansfagea</i> Cooper and Grant .....	VR	<i>Choanodus perfectus</i> Cooper and Grant .....	VR
<i>Holotricharina hirsuta</i> Cooper and Grant .....	VR	<i>Chonosteges pulcher</i> Cooper and Grant .....	C
<i>Hustedia narinosa</i> Cooper and Grant .....	A	<i>Chonosteges variabilis</i> Cooper and Grant .....	R
<i>Kutorginella robusta</i> Cooper and Grant .....	VR	<i>Collemataria irregularis</i> Cooper and Grant .....	C
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	R	<i>Composita bucculenta</i> Cooper and Grant .....	C
<i>Meekella calathica</i> Cooper and Grant .....	C	<i>Composita imbricata</i> Cooper and Grant .....	A
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	R	<i>Composita</i> sp. ....	C
<i>Neophricadothyris crassibacca</i> Cooper and Grant .....	A	<i>Compressopproductus flabellatus</i> Cooper and Grant .....	C
<i>Neospirifer thescelus</i> Cooper and Grant .....	R	<i>Compressopproductus</i> sp. ....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant .....	C	<i>Compressopproductus thomasi</i> Cooper and Grant .....	R
<i>Peniculauris transversa</i> Cooper and Grant .....	VR	<i>Cooperina parva</i> Cooper and Grant .....	VR
<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	A	<i>Coscinophora nodosa</i> (Cooper and Stehli) .....	VR
<i>Reticulariina craticula</i> Cooper and Grant .....	C	<i>Coscinophora</i> sp. ....	VR
<i>Rhynchopora hebetata</i> Cooper and Grant .....	R	<i>Crurithyris</i> sp. ....	R
<i>Stenosisma camurum</i> Cooper and Grant .....	VR	<i>Crurithyris</i> sp. d .....	VR
<i>Stenosisma triquetrum</i> Cooper and Grant .....	C	<i>Derbyia cincinnata</i> Cooper and Grant .....	C
<i>Texarina wordensis</i> (R.E. King) .....	A	<i>Derbyia complicata</i> Cooper and Grant .....	R
<i>Waagenoconcha convexa</i> Cooper and Grant .....	VR	<i>Derbyia informis</i> Cooper and Grant .....	C



	Rarity code		Rarity code
LOCALITY N721u - Continued			
<i>Derbyia laqueata</i> Cooper and Grant .....	C	<i>Spyridiophora reticulata</i> (R.E. King) .....	R
<i>Derbyia</i> sp. ....	R	<i>Stenosisma</i> sp. ....	VR
<i>Dielasma anterolatum</i> Cooper and Grant .....	VR	<i>Stenosisma triquetrum</i> Cooper and Grant .....	R
<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR	<i>Tautosia pulchra</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	R	<i>Thamnusia anterospinosa</i> Cooper and Grant .....	R
<i>Diplanus lamellatus</i> (R.E. King) .....	A	<i>Thedusia paucicostata</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Lissosia</i> ) <i>vagabundus</i> Cooper and Grant .....	C	<i>Thedusia</i> sp. ....	R
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>giganteus</i> Cooper and Grant .....	VR	<i>Torynechus caelatus</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>planus</i> Cooper and Grant .....	R	<i>Tropidelasma</i> sp. 4 .....	R
<i>Echinauris circularis</i> Cooper and Grant .....	C	<i>Waagenoconcha convexa</i> Cooper and Grant .....	C
<i>Echinauris irregularis</i> Cooper and Grant .....	SA	<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	C
<i>Echinauris</i> sp. ....	VR	<i>Xestosia schucherti</i> (R.E. King) .....	C
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R	LOCALITY N721v : Cathedral Mountain Formation	
<i>Edriosteges</i> sp. ....	VR	<i>Megousia umbonata</i> Cooper and Grant .....	VR
<i>Enteleles plummeri</i> R.E. King .....	A	LOCALITY N721w : Road Canyon Formation	
<i>Enteleles</i> sp. ....	R	<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Glyptosteges sulcatus</i> Cooper and Grant .....	R	<i>Bothrostegium derbyoideum</i> Cooper and Grant .....	R
<i>Goniarina</i> sp. 5 .....	R	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR
<i>Grandaurispina</i> sp. 7 .....	VR	<i>Chondronia ovalis</i> Cooper and Grant .....	C
<i>Hercosestria laevis</i> Cooper and Grant .....	A	<i>Composita crassa</i> Cooper and Grant .....	C
<i>Hercosia uddeni</i> (Böse) .....	C	<i>Coscinophora magnifica</i> Cooper and Grant .....	A
<i>Heteralosia</i> sp. 5 .....	VR	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	VR
<i>Heteralosia</i> sp. ....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	R
<i>Heteralosia vidriensis</i> Cooper and Grant .....	C	<i>Echinauris lappacea</i> Cooper and Grant .....	R
<i>Heteraria blakemorei</i> Cooper and Grant .....	R	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R
<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR	<i>Hustedia</i> sp. ....	VR
<i>Hustedia compressa</i> Cooper and Grant .....	R	<i>Meekella calathica</i> Cooper and Grant .....	A
<i>Hustedia lusca</i> Cooper and Grant .....	VA	<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR
<i>Hustedia</i> sp. ....	C	<i>Taphroestria peculiaris</i> Cooper and Grant .....	C
<i>Institella leonardensis</i> (R.E. King) .....	VA	LOCALITY N721x : Road Canyon Formation	
<i>Isogramma</i> cf. <i>lobatum</i> Cooper and Grant .....	R	<i>Acosarina mesoplatys</i> (R.E. King) .....	A
<i>Kochiproductus</i> sp. 6 .....	VR	<i>Anteridocus seminudus</i> Cooper and Grant .....	C
<i>Kutorginella umbonata</i> (Muir-Wood and Cooper) .....	VR	<i>Chonetinetes angustisulcatus</i> Cooper and Grant .....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Chonosteges costellatus</i> Cooper and Grant .....	VR
<i>Lepidospirifer demissus</i> Cooper and Grant .....	R	<i>Composita crassa</i> Cooper and Grant .....	C
<i>Lepidospirifer inferus</i> Cooper and Grant .....	VR	<i>Composita quantilla</i> Cooper and Grant .....	VA
<i>Linoproductus</i> sp. ....	R	<i>Cooperina subcuneata</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	VA	<i>Crurithyris minutalis</i> Cooper and Grant .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VA	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	C
<i>Metriolepis larina</i> Cooper and Grant .....	R	<i>Derbyia laqueata</i> Cooper and Grant .....	C
<i>Metriolepis</i> sp. ....	VR	<i>Dielasma expansum</i> Cooper and Grant .....	VR
<i>Metriolepis tegulata</i> Cooper and Grant .....	R	<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>solidus</i> Cooper and Grant .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	A	<i>Echinauris lappacea</i> Cooper and Grant .....	C
<i>Neophricadothyris</i> sp. ....	C	<i>Echinauris</i> sp. ....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	C	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R
<i>Notothyris</i> sp. ....	VR	<i>Eolyttonia chaotica</i> Cooper and Grant .....	R
<i>Paranorella</i> sp. 4 .....	VR	<i>Heteralosia</i> sp. ....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	R	<i>Hustedia connorsii</i> Cooper and Grant .....	A
<i>Petrocrania</i> sp. ....	VR	<i>Kochiproductus</i> sp. 6 .....	VR
<i>Phrenophoria anterocostata</i> Cooper and Grant .....	VR	<i>Liosotella costata</i> Cooper and Grant .....	R
<i>Phrenophoria vetula</i> Cooper and Grant .....	R	<i>Meekella calathica</i> Cooper and Grant .....	A
<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	R
<i>Pseudodielasma</i> sp. ....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Pseudoleptodus cucullatus</i> Cooper and Grant .....	VR	<i>Neophricadothyris crassibecca</i> Cooper and Grant .....	C
<i>Pseudoleptodus?</i> sp. 5 .....	VR	<i>Neospirifer thescelus</i> Cooper and Grant .....	C
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	C	<i>Paraspiriferina</i> sp. ....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	A	<i>Peniculauris costata</i> Cooper and Grant .....	VR
<i>Rhynchopora hebetata</i> Cooper and Grant .....	R	<i>Peniculauris transversa</i> Cooper and Grant .....	VR
<i>Rhytisia rugosa</i> Cooper and Grant .....	VR	<i>Petasmatherus nitidus</i> Cooper and Grant .....	A
<i>Rugaria hessensis</i> (R.E. King) .....	VR	<i>Reticulariina</i> sp. ....	C
<i>Rugatia paraindica</i> (McKee) .....	R	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	C
<i>Scacchinella</i> sp. ....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR
<i>Siphonostia allenii</i> Cooper and Grant .....	C		

	Rarity code
LOCALITY N721x - Continued	
<i>Rhytisia rugosa</i> Cooper and Grant.....	C
<i>Spiriferellina tricola</i> Cooper and Grant.....	VR
<i>Stenoscisma calvatum</i> Cooper and Grant.....	C
<i>Stenoscisma camurum</i> Cooper and Grant.....	VR
<i>Stenoscisma</i> sp. ....	VR
<i>Taphroscistria peculiaris</i> Cooper and Grant.....	R
<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Thedusia</i> sp. ....	R
<i>Waagenoconcha convexa</i> Cooper and Grant.....	VR
<i>Xenosteges magnus</i> Cooper and Grant.....	R

LOCALITY N721y : Road Canyon Formation	
<i>Acosarina mesoplatys</i> (R.E. King) .....	A
<i>Anteridocus seminudus</i> Cooper and Grant.....	R
<i>Bothrostegium derbyoideum</i> Cooper and Grant.....	C
<i>Composita crassa</i> Cooper and Grant.....	C
<i>Composita pilula</i> Cooper and Grant.....	VR
<i>Composita</i> sp. ....	C
<i>Cyclacantharia paucispinosa</i> Cooper and Grant.....	R
<i>Cyclacantharia transitoria</i> Cooper and Grant.....	C
<i>Derbyia cincinnata</i> Cooper and Grant.....	R
<i>Derbyia complicata</i> Cooper and Grant.....	VR
<i>Derbyia informis</i> Cooper and Grant.....	VR
<i>Derbyia laqueata</i> Cooper and Grant.....	C
<i>Derbyia</i> sp. ....	R
<i>Dielasma</i> sp. ....	VR
<i>Echinauris crassa</i> Cooper and Grant.....	VR
<i>Echinauris irregularis</i> Cooper and Grant.....	C
<i>Echinauris lappacea</i> Cooper and Grant.....	VR
<i>Edriosteges compactus</i> Cooper and Grant.....	R
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	A
<i>Eolyttonia chaotica</i> Cooper and Grant.....	C
<i>Hercosestria cribrosa</i> Cooper and Grant.....	C
<i>Heteralosia</i> sp. 3 .....	VR
<i>Holotricharina hirsuta</i> Cooper and Grant.....	VR
<i>Hustedia consuta</i> Cooper and Grant.....	C
<i>Hustedia</i> sp. ....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant.....	VR
<i>Liosotella costata</i> Cooper and Grant.....	VR
<i>Meekella calathica</i> Cooper and Grant.....	C
<i>Meekella</i> sp. ....	R
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR
<i>Metriolepis ziczac</i> Cooper and Grant.....	VR
<i>Neophricadothyris</i> sp. ....	VR
<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR
<i>Neospirifer thescelus</i> Cooper and Grant.....	VR
<i>Paucispinifera costellata</i> Cooper and Grant.....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant.....	C
<i>Petasmatherus pumilus</i> Cooper and Grant.....	C
<i>Reticulariina craticula</i> Cooper and Grant.....	C
<i>Reticulariina</i> sp. ....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR
<i>Rhytisia rugosa</i> Cooper and Grant.....	R
<i>Rugatia paraindica</i> (McKee) .....	VR
<i>Stenoscisma bonum</i> Cooper and Grant.....	R
<i>Stenoscisma calvatum</i> Cooper and Grant.....	R
<i>Stenoscisma camurum</i> Cooper and Grant.....	VR
<i>Taphroscistria expansa</i> Cooper and Grant.....	VR
<i>Taphroscistria peculiaris</i> Cooper and Grant.....	A
<i>Tautosia</i> sp. ....	VR
<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Xenosteges magnus</i> Cooper and Grant.....	C
<i>Yakovlevia sulcata</i> Cooper and Grant.....	VR

	Rarity code
LOCALITY N721z : Road Canyon Formation	
<i>Acanthocrania densispina</i> Cooper and Grant.....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	A
<i>Chonetinetes angustisulcatus</i> Cooper and Grant.....	VR
<i>Collemataria batilliformis</i> Cooper and Grant.....	C
<i>Collemataria</i> sp. ....	C
<i>Composita crassa</i> Cooper and Grant.....	C
<i>Cooperina subcuneata</i> Cooper and Grant.....	VR
<i>Coscinophora magnifica</i> Cooper and Grant.....	R
<i>Cyclacantharia transitoria</i> Cooper and Grant.....	C
<i>Derbyia cincinnata</i> Cooper and Grant.....	R
<i>Dielasma</i> sp. ....	R
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant.....	C
<i>Echinauris lappacea</i> Cooper and Grant.....	R
<i>Echinauris liumbona</i> Cooper and Grant.....	C
<i>Echinauris</i> sp. ....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	R
<i>Enteleles subnudus</i> Cooper and Grant.....	R
<i>Goniarrina striata</i> Cooper and Grant.....	R
<i>Heteralosia hystricula</i> (Girty) .....	VR
<i>Hustedia ampullacea</i> Cooper and Grant.....	VR
<i>Hustedia connorsii</i> Cooper and Grant.....	C
<i>Lepidocrania tardispinosa</i> Cooper and Grant.....	R
<i>Meekella calathica</i> Cooper and Grant.....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R
<i>Metriolepis ziczac</i> Cooper and Grant.....	R
<i>Neophricadothyris cordata</i> Cooper and Grant.....	R
<i>Neospirifer formulosus</i> Cooper and Grant.....	R
<i>Paraspiriferina pulchra</i> Cooper and Grant.....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant.....	C
<i>Petasmatherus nitidus</i> Cooper and Grant.....	C
<i>Petasmatherus pumilus</i> Cooper and Grant.....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	C
<i>Rhamnaria vinnula</i> Cooper and Grant.....	C
<i>Rhytisia rugosa</i> Cooper and Grant.....	C
<i>Simplicarina incompta</i> Cooper and Grant.....	VR
<i>Stenoscisma camurum</i> Cooper and Grant.....	VR
<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Thedusia mesocostata</i> Cooper and Grant.....	R
<i>Tropidelasma corniculum</i> Cooper and Grant.....	C
<i>Xenosteges trivialis</i> Cooper and Grant.....	C

LOCALITY N722a : Phosphoria Formation	
<i>Echinauris magna</i> Cooper and Grant.....	VR

LOCALITY N722b : Phosphoria Formation	
<i>Echinauris magna</i> Cooper and Grant.....	VR

LOCALITY N722c : Park City Formation	
<i>Echinauris magna</i> Cooper and Grant.....	C

LOCALITY N722d : Phosphoria Formation	
<i>Echinauris magna</i> Cooper and Grant.....	VR

LOCALITY N722e : Road Canyon Formation	
<i>Acanthocrania densispina</i> Cooper and Grant.....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	VA
<i>Bothrostegium pusillum</i> Cooper and Grant.....	C
<i>Chonetinetes angustisulcatus</i> Cooper and Grant.....	R
<i>Collemataria batilliformis</i> Cooper and Grant.....	R
<i>Collemataria</i> sp. ....	C
<i>Composita crassa</i> Cooper and Grant.....	C
<i>Cooperina subcuneata</i> Cooper and Grant.....	R
<i>Coscinophora magnifica</i> Cooper and Grant.....	VR
<i>Cyclacantharia transitoria</i> Cooper and Grant.....	C
<i>Derbyia cincinnata</i> Cooper and Grant.....	C
<i>Dielasma bellulum</i> Cooper and Grant.....	R

	Rarity code		Rarity code
LOCALITY N722e - Continued			
<i>Dielasma labiatum</i> Cooper and Grant.....	VR	<i>Reticulariina</i> sp. ....	R
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant.....	R	<i>Rhynchopora hebetata</i> Cooper and Grant.....	VR
<i>Echinauris lappacea</i> Cooper and Grant.....	A	<i>Rhynchopora sphenoides</i> Cooper and Grant.....	R
<i>Echinauris</i> sp. ....	R	<i>Stenosisma bonum</i> Cooper and Grant.....	R
<i>Edriosteges compactus</i> Cooper and Grant.....	R	<i>Stenosisma camurum</i> Cooper and Grant.....	R
<i>Heteralosia vidriensis</i> Cooper and Grant.....	VR	<i>Tautosia galbina</i> Cooper and Grant.....	R
<i>Hustedia connorsii</i> Cooper and Grant.....	A	<i>Yakovlevia sulcata</i> Cooper and Grant.....	C
<i>Lepidocrania tardispinosa</i> Cooper and Grant.....	R		
<i>Meekella calathica</i> Cooper and Grant.....	A	LOCALITY N722h : Skinner Ranch Formation, Sullivan	
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R	Peak Member	
<i>Metriolepis ziczac</i> Cooper and Grant.....	R	<i>Acosarina dorsisulcata</i> Cooper and Grant.....	C
<i>Neophricadothyris crassibacca</i> Cooper and Grant.....	R	<i>Acosarina</i> sp. ....	VR
<i>Paraspiriferina cellulana</i> Cooper and Grant.....	R	<i>Acritosia peculiaris</i> Cooper and Grant.....	C
<i>Paucispinifera sulcata</i> Cooper and Grant.....	R	<i>Cartorhium zoyei</i> Cooper and Grant.....	VR
<i>Peniculauris costata</i> Cooper and Grant.....	VR	<i>Chonosteges variabilis</i> Cooper and Grant.....	R
<i>Petasmatherus pumilus</i> Cooper and Grant.....	R	<i>Cleiothyridina</i> sp. ....	VR
<i>Pseudodielasma</i> sp. ....	VR	<i>Composita apheles</i> Cooper and Grant.....	R
<i>Rhamnaria vinnula</i> Cooper and Grant.....	C	<i>Composita bucculenta</i> Cooper and Grant.....	VR
<i>Rhynchopora sphenoides</i> Cooper and Grant.....	VR	<i>Composita</i> sp. ....	VR
<i>Rhytisia rugosa</i> Cooper and Grant.....	C	<i>Derbyia crenulata</i> Girty.....	R
<i>Simplicarina incompta</i> Cooper and Grant.....	VR	<i>Dielasma</i> sp. ....	VR
<i>Stenosisma bonum</i> Cooper and Grant.....	VR	<i>Diplanus lamellatus</i> (R.E. King).....	R
<i>Texarina</i> sp. ....	VR	<i>Echinauris</i> sp. ....	R
<i>Waagenoconcha convexa</i> Cooper and Grant.....	VR	<i>Enteleles</i> sp. ....	R
<i>Xenosteges trivialis</i> Cooper and Grant.....	C	<i>Eolyttonia</i> sp. ....	R
<i>Yakovlevia sulcata</i> Cooper and Grant.....	VR	<i>Glyptosteges angustus</i> (R.E. King).....	C
		<i>Glyptosteges intricatus</i> Cooper and Grant.....	R
LOCALITY N722f : Road Canyon Formation		<i>Hustedia cepacea</i> Cooper and Grant.....	R
<i>Acosarina mesoplatys</i> (R.E. King).....	C	<i>Hustedia</i> sp. ....	R
<i>Anteridocus seminudus</i> Cooper and Grant.....	C	<i>Limbella</i> sp. ....	VR
<i>Chondronia ovalis</i> Cooper and Grant.....	C	<i>Meekella hessensis</i> R.E. King.....	C
<i>Cleiothyridina nana</i> Cooper and Grant.....	R	<i>Meekella</i> sp. ....	R
<i>Composita crassa</i> Cooper and Grant.....	VR	<i>Neophricadothyris</i> sp. ....	R
<i>Composita</i> sp. ....	C	<i>Peniculauris</i> sp. 1.....	VR
<i>Derbyia laqueata</i> Cooper and Grant.....	C	<i>Phrenophoria</i> sp. 1.....	VR
<i>Echinauris?</i> sp. ....	VR	<i>Reticulariina</i> sp. ....	R
<i>Edriosteges compactus</i> Cooper and Grant.....	R	<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Hustedia</i> sp. ....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	R
<i>Meekella calathica</i> Cooper and Grant.....	C	<i>Stenosisma hadrum</i> Cooper and Grant.....	VR
<i>Metriolepis ziczac</i> Cooper and Grant.....	VR		
<i>Taphroestria peculiaris</i> Cooper and Grant.....	C	LOCALITY N722j : Skinner Ranch Formation, Sullivan	
		Peak Member	
LOCALITY N722g : Road Canyon Formation		<i>Echinauris</i> sp. ....	R
<i>Acosarina mesoplatys</i> (R.E. King).....	C	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
<i>Composita crassa</i> Cooper and Grant.....	C		
<i>Derbyia cincinnata</i> Cooper and Grant.....	VR	LOCALITY N722k : Skinner Ranch Formation, Sullivan	
<i>Dielasma ellipsoideum</i> Cooper and Grant.....	VR	Peak Member	
<i>Dyoros (Dyoros) angulatus</i> Cooper and Grant.....	C	<i>Limbella limbata</i> Cooper and Grant.....	VR
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant.....	VR		
<i>Dyoros (Lissosia) parvus</i> Cooper and Grant.....	C	LOCALITY N722-l : Skinner Ranch Formation, Sullivan	
<i>Echinauris bella</i> Cooper and Grant.....	C	Peak Member	
<i>Heterelasma glansfagea</i> Cooper and Grant.....	C	<i>Acosarina dorsisulcata</i> Cooper and Grant.....	A
<i>Hustedia consuta</i> Cooper and Grant.....	VA	<i>Acosarina</i> sp. ....	VR
<i>Hustedia cuneata</i> Cooper and Grant.....	C	<i>Acritosia peculiaris</i> Cooper and Grant.....	R
<i>Hustedia</i> sp. ....	R	<i>Antronaria voluminosa</i> Cooper and Grant.....	R
<i>Liosotella costata</i> Cooper and Grant.....	R	<i>Cartorhium zoyei</i> Cooper and Grant.....	VR
<i>Meekella calathica</i> Cooper and Grant.....	VR	<i>Chonosteges variabilis</i> Cooper and Grant.....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	C	<i>Collemataria platys</i> Cooper and Grant.....	VR
<i>Neophricadothyris</i> sp. ....	VR	<i>Composita apheles</i> Cooper and Grant.....	C
<i>Neospirifer bakeri bakeri</i> R.E. King.....	C	<i>Compressoproducetus parvus</i> Cooper and Grant.....	VR
<i>Paucispinifera</i> sp. ....	VR	<i>Coscinophora monilifera</i> Cooper and Grant.....	VR
<i>Petasmatherus pumilus</i> Cooper and Grant.....	VR	<i>Crurithyris</i> sp. b.....	VR
<i>Phrenophoria</i> sp. ....	VR	<i>Derbyia crenulata</i> Girty.....	VR
		<i>Derbyia nasuta</i> Girty.....	R
		<i>Derbyia</i> sp. ....	R

	Rarity code		Rarity code
LOCALITY N722-l - Continued			
<i>Dielasma</i> sp. ....	VR	<i>Limbella</i> sp. ....	VR
<i>Diplanus lamellatus</i> (R.E. King) ....	C	<i>Linoproductus undatus</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty).....	VR	<i>Oncosarina whitei</i> (R.E. King).....	C
<i>Echinauris</i> sp. ....	C	<i>Peniculauris imitata</i> Cooper and Grant.....	R
<i>Enteles subcircularis</i> Cooper and Grant .....	C	<i>Thamnosia silicica</i> Cooper and Grant.....	VR
<i>Eolyttonia</i> sp. ....	R	LOCALITY N722t : Word Formation, Appel Ranch	
<i>Geyerella hessi</i> Cooper and Grant.....	VR	Member	
<i>Glyptosteges angustus</i> (R.E. King).....	C	<i>Acanthocrania intermedia</i> Cooper and Grant.....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant.....	R	<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	R
<i>Goniarina</i> sp. 3 .....	R	<i>Bothrionia transversa</i> Cooper and Grant .....	R
<i>Heteralosia</i> sp. 7 .....	VR	<i>Cartorhium retusum</i> Cooper and Grant.....	VR
<i>Hustedia cepacea</i> Cooper and Grant .....	A	<i>Composita enormis</i> Cooper and Grant .....	C
<i>Isogramma</i> sp. ....	VR	<i>Composita parasulcata</i> Cooper and Grant.....	C
<i>Kochiproductus</i> sp. 5? .....	R	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud.....	R
<i>Kochiproductus</i> sp. ....	VR	<i>Crurithyris major</i> Cooper and Grant.....	VR
<i>Lepidospirifer</i> sp. ....	VR	<i>Ctenalosia fixata</i> Cooper and Stehli .....	A
<i>Limbella limbata</i> Cooper and Grant .....	C	<i>Ctenalosia</i> sp. ....	R
<i>Linoproductus angustus</i> R.E. King .....	VR	<i>Cyclacantharia kingorum</i> Cooper and Grant.....	C
<i>Meekella hessensis</i> R.E. King.....	A	<i>Derbyia filosa</i> Cooper and Grant .....	C
<i>Meekella</i> sp. ....	VR	<i>Derbyia pannucia</i> Cooper and Grant .....	R
<i>Metriolepis scruposa</i> Cooper and Grant.....	VR	<i>Dielasma adamantinum</i> Cooper and Grant .....	R
<i>Metriolepis</i> sp. ....	VR	<i>Dielasma</i> sp. ....	R
<i>Micraphelia</i> sp. ....	VR	<i>Dielasma zebratum</i> Cooper and Grant.....	R
<i>Neophricadothyris</i> sp. ....	C	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	VA
<i>Oncosarina</i> sp. ....	C	<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>quadrangulatus</i> Cooper and Grant..	A
<i>Paraspiriferina</i> sp. ....	VR	<i>Eolyttonia progressa</i> Cooper and Grant .....	C
<i>Peniculauris</i> sp. 1 .....	R	<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	C
<i>Phrenophoria repugnans</i> Cooper and Grant.....	VR	<i>Grandaurispina crassa</i> Cooper and Grant .....	R
<i>Plectelasma kingi</i> Cooper and Grant.....	VR	<i>Grandaurispina rara</i> Cooper and Grant .....	C
<i>Pontisia nanas</i> (Stehli) .....	R	<i>Heteralosia</i> sp. ....	VR
<i>Pseudodielasma</i> sp. ....	R	<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	A
<i>Reticulariina impressa</i> Cooper and Grant .....	C	<i>Leiorhynchoidea scelestia</i> Cooper and Grant .....	R
<i>Reticulariina</i> sp. ....	C	<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	R
<i>Rhamnaria grandis</i> Cooper and Grant.....	VR	<i>Leurosina marginata</i> Cooper and Grant .....	VA
<i>Rhipidomella hessensis</i> R.E. King.....	R	<i>Liosotella irregularis</i> Cooper and Grant.....	A
<i>Rugaria crassa</i> Cooper and Grant.....	VR	<i>Meekella skenoides</i> Girty .....	A
<i>Sceletonia crassa</i> Cooper and Grant.....	R	<i>Megousia definita</i> Cooper and Grant .....	R
<i>Spyridiophora reticulata</i> (R.E. King).....	C	<i>Neophricadothyris conara</i> Cooper and Grant.....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Paraspiriferina rotundata</i> Cooper and Grant.....	C
LOCALITY N722m : Skinner Ranch Formation			
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	VR
<i>Antronaria dissona</i> Cooper and Grant.....	VR	<i>Petrocrania</i> sp. ....	VR
<i>Antronaria voluminosa</i> Cooper and Grant .....	VR	<i>Plectelasma dubium</i> Cooper and Grant.....	VR
<i>Cartorhium zoyei</i> Cooper and Grant.....	VR	<i>Pseudodielasma ovatum</i> Cooper and Grant.....	VR
<i>Compressoproductus parvus</i> Cooper and Grant.....	VR	<i>Pseudodielasma</i> sp. ....	A
<i>Cyclacantharia gigantea</i> Cooper and Grant .....	VR	<i>Reticulariina cerina</i> Cooper and Grant .....	C
<i>Geyerella hessi</i> Cooper and Grant.....	VR	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C
<i>Glyptosteges angustus</i> (R.E. King).....	VR	<i>Rhynchopora tenera</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR	<i>Spiriferella clypeata</i> Cooper and Grant .....	C
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Spiriferellina hilli</i> (Girty).....	VR
<i>Martinia</i> sp. ....	R	<i>Texarina elongata</i> Cooper and Grant .....	R
<i>Peniculauris</i> sp. 1 .....	VR	<i>Thedusia procera</i> Cooper and Grant .....	R
<i>Spyridiophora reticulata</i> (R.E. King).....	VR	<i>Tropidelasma anthicum</i> Cooper and Grant .....	VR
<i>Stenoscisma hadrum</i> Cooper and Grant.....	R	<i>Waagenoconcha magnifica</i> Cooper and Grant.....	R
LOCALITY N722o : Skinner Ranch Formation			
<i>Geyerella hessi</i> Cooper and Grant.....	VR	<i>Wellerella girtyi girtyi</i> Cooper and Grant.....	C
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Xenosteges quadratus</i> Cooper and Grant .....	R
LOCALITY N722p : Hess Formation			
<i>Antronaria speciosa</i> Cooper and Grant .....	VR	<i>Yakovlevia indentata</i> Cooper and Grant .....	R
<i>Antronaria transversa</i> (R.E. King) .....	VR	LOCALITY N722v : Road Canyon Formation	
<i>Dielasma longisulcatum</i> Cooper and Grant.....	VR	<i>Acosarina mesoplatys</i> (R.E. King).....	VR
<i>Enteles subcircularis</i> Cooper and Grant .....	VR	<i>Collemataria batilliformis</i> Cooper and Grant .....	C
		<i>Composita</i> sp. ....	VR
		<i>Compressoproductus acuminatus</i> Cooper and Grant .....	A
		<i>Cooperina subcuneata</i> Cooper and Grant.....	R
		<i>Derbyia laqueata</i> Cooper and Grant .....	R
		<i>Echinauris lappacea</i> Cooper and Grant.....	R

	Rarity code		Rarity code
LOCALITY N722v - Continued		LOCALITY N723-l : Skinner Ranch Formation	
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	C
<i>Hustedia consuta</i> Cooper and Grant .....	VR	<i>Altiplexus</i> sp. 1 .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Antronaria dissona</i> Cooper and Grant.....	R
LOCALITY N722w : Neal Ranch Formation		<i>Antronaria voluminosa</i> Cooper and Grant .....	R
<i>Geyerella kingorum</i> Cooper and Grant .....	R	<i>Chonosteges variabilis</i> Cooper and Grant.....	R
<i>Pontisia magnicostata</i> Cooper and Grant.....	VR	<i>Composita apheles</i> Cooper and Grant .....	VR
LOCALITY N722x : Neal Ranch Formation		<i>Compressopproductus parvus</i> Cooper and Grant.....	R
<i>Enteleles wolfcampensis</i> R.E. King .....	VR	<i>Dielasma hessense</i> Cooper and Grant .....	VR
<i>Eolyttonia phialiforma</i> Cooper and Grant.....	R	<i>Enteleles rotundobesus</i> Cooper and Grant .....	R
<i>Neospirifer apothescelus</i> Cooper and Grant .....	VR	<i>Enteleles</i> sp. ....	C
LOCALITY N723a : Road Canyon Formation		<i>Glyptosteges intricatus</i> Cooper and Grant.....	R
<i>Acosarina mesoplatys</i> (R.E. King) .....	R	<i>Hustedia hessensis</i> R.E. King.....	R
<i>Composita crassa</i> Cooper and Grant .....	A	<i>Limbella limbata</i> Cooper and Grant .....	C
<i>Crurithyris minutalis</i> Cooper and Grant .....	C	<i>Meekella hessensis</i> R.E. King.....	C
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant.....	R	<i>Meekella</i> sp. ....	VR
<i>Elassonia micraria</i> Cooper and Grant .....	C	<i>Neophricadothyris</i> sp. ....	VR
<i>Hustedia connorsi</i> Cooper and Grant .....	VR	<i>Nudauris enigmatica</i> Cooper and Grant.....	VR
<i>Hustedia consuta</i> Cooper and Grant .....	C	<i>Oncosarina spinicostata</i> Cooper and Grant.....	R
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Rhipidomella hessensis</i> R.E. King.....	R
<i>Neospirifer formulosus</i> Cooper and Grant.....	R	<i>Rhipidomella</i> sp. ....	VR
<i>Petasmatherus nitidus</i> Cooper and Grant.....	C	<i>Spyridiophora reticulata</i> (R.E. King) .....	R
<i>Texarina wordensis</i> (R.E. King) .....	VR	<i>Stenosisma hadrum</i> Cooper and Grant.....	R
<i>Thedusia mesocostata</i> Cooper and Grant .....	R	<i>Teguliferina compacta</i> Cooper and Grant .....	VR
<i>Xenosteges magnus</i> Cooper and Grant.....	VR	<i>Tropidelasma</i> sp. 3 .....	R
LOCALITY N723b : Hess Formation		LOCALITY N723n : Cathedral Mountain Formation	
<i>Antronaria titania</i> Cooper and Grant.....	VR	<i>Agelesia triangularis</i> (R.E. King) .....	VR
LOCALITY N723d : Lenox Hills Formation		<i>Institella leonardensis</i> (R.E. King).....	VR
<i>Neophricadothyris transversa</i> Cooper and Grant.....	VR	LOCALITY N723o : Skinner Ranch Formation	
LOCALITY N723e : Skinner Ranch Formation, Sullivan Peak Member		<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R
<i>Eolyttonia gigantea</i> Cooper and Grant.....	VR	<i>Antronaria dissona</i> Cooper and Grant.....	VR
LOCALITY N723h : Skinner Ranch Formation		<i>Antronaria voluminosa</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant.....	R	<i>Composita</i> sp. ....	C
<i>Meekella hessensis</i> R.E. King.....	VR	<i>Crurithyris</i> sp. ....	R
<i>Oncosarina spinicostata</i> Cooper and Grant.....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	VR
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Enteleles</i> sp. ....	VR
<i>Stenosisma hadrum</i> Cooper and Grant.....	VR	<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR
<i>Torynechus alectorius</i> Cooper and Grant.....	VR	<i>Hustedia catella</i> Cooper and Grant .....	R
LOCALITY N723k : Cathedral Mountain Formation		<i>Meekella hessensis</i> R.E. King.....	R
<i>Chonosteges costellatus</i> Cooper and Grant.....	VR	<i>Neophricadothyris</i> sp. ....	R
<i>Compressopproductus</i> sp. ....	VR	<i>Plectelasma kingi</i> Cooper and Grant.....	VR
<i>Cyclacantharia</i> sp. ....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Derbyia</i> sp. ....	VR	<i>Rhipidomella hessensis</i> R.E. King.....	R
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant.....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	R	<i>Stenosisma</i> sp. ....	VR
<i>Enteleles</i> sp. ....	VR	LOCALITY N723p : Cathedral Mountain Formation	
<i>Eolyttonia</i> sp. ....	VR	<i>Anemonaria sublaevis</i> (R.E. King) .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant.....	R	<i>Derbyia informis</i> Cooper and Grant.....	VR
<i>Hercosia uddeni</i> (Böse) .....	VR	<i>Dyoros (Tetragonetes) lateralis</i> Cooper and Grant .....	VR
<i>Hustedia lusca</i> Cooper and Grant .....	R	<i>Dyoros (Tetragonetes) planus</i> Cooper and Grant.....	R
<i>Kochiproductus</i> sp. ....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Peniculauris subcostata</i> (R.E. King) .....	R
<i>Megousia umbonata</i> Cooper and Grant .....	VR	LOCALITY N723q : Skinner Ranch Formation	
<i>Metriolepis tegulata</i> Cooper and Grant.....	VR	<i>Glyptosteges angustus</i> (R.E. King) .....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	LOCALITY N723r : Lenox Hills Formation	
<i>Thedusia bucrenata</i> Cooper and Grant.....	VR	<i>Teguliferina boesei</i> R.E. King .....	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	VR	LOCALITY N723s : Skinner Ranch Formation	
		<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
		<i>Antronaria dissona</i> Cooper and Grant.....	VR
		<i>Antronaria titania</i> Cooper and Grant.....	VR
		<i>Chonosteges limbatus</i> Cooper and Grant .....	VR



	Rarity code		Rarity code
LOCALITY N723s - Continued			
<i>Composita apheles</i> Cooper and Grant .....	VR	<i>Enteleles leonardensis</i> R.E. King .....	C
<i>Derbyia nasuta</i> Girty .....	VR	<i>Hercosia uddeni</i> (Böse) .....	C
<i>Enteleles leonardensis</i> R.E. King .....	VR	<i>Hustedia lusca</i> Cooper and Grant .....	R
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Hustedia spicata</i> Cooper and Grant .....	R
<i>Stenosisma hadrum</i> Cooper and Grant .....	VR	<i>Institella leonardensis</i> (R.E. King) .....	VR
LOCALITY N723t : Word Formation, Willis Ranch		<i>Meekella calathica</i> Cooper and Grant .....	R
Member		<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR
<i>Acanthocrania intermedia</i> Cooper and Grant .....	VR	<i>Rhipidomella hispidula</i> Cooper and Grant .....	R
<i>Cartorhium chelomatum</i> Cooper and Grant .....	R	<i>Stenosisma</i> sp. ....	VR
<i>Collemataria elongata</i> Cooper and Grant .....	A	LOCALITY N723v : Cathedral Mountain Formation,	
<i>Composita parasulcata</i> Cooper and Grant .....	C	Wedin Member	
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	R	<i>Agelesia triangularis</i> (R.E. King) .....	VA
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	A	<i>Cartorhium coristum</i> Cooper and Grant .....	R
<i>Derbyia filosa</i> Cooper and Grant .....	C	<i>Choanodus irregularis</i> Cooper and Grant .....	VR
<i>Derbyia pannucia</i> Cooper and Grant .....	A	<i>Chonosteges pulcher</i> Cooper and Grant .....	C
<i>Dielasma compactum</i> Cooper and Grant .....	C	<i>Collemataria irregularis</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	VR	<i>Composita bucculenta</i> Cooper and Grant .....	VR
<i>Dielasma zebratum</i> Cooper and Grant .....	VR	<i>Compressoproductus thomasi</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	A	<i>Cooperina parva</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Lissosia</i> ) <i>concavus</i> Cooper and Grant .....	C	<i>Derbyia complicata</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>wordensis</i> Cooper and Grant .....	VR	<i>Diplanus lamellatus</i> (R.E. King) .....	R
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	A	<i>Echinauris crassa</i> Cooper and Grant .....	VR
<i>Echinosteges tuberculatus</i> (R.E. King) .....	C	<i>Echinauris irregularis</i> Cooper and Grant .....	VR
<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	C	<i>Enteleles plummeri</i> R.E. King .....	C
<i>Heteralosia hystricula</i> (Girty) .....	R	<i>Hercosia uddeni</i> (Böse) .....	C
<i>Heterelasma concavum</i> Cooper and Grant .....	R	<i>Heterelasma angulatum</i> Cooper and Grant .....	VR
<i>Hustedia pugilla</i> Cooper and Grant .....	A	<i>Hustedia ampullacea</i> Cooper and Grant .....	VR
<i>Hustedia sculptilis</i> Cooper and Grant .....	R	<i>Institella leonardensis</i> (R.E. King) .....	C
<i>Hustedia</i> sp. ....	R	<i>Meekella calathica</i> Cooper and Grant .....	C
<i>Leurosina lata</i> Cooper and Grant .....	R	<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR
<i>Liosotella wordensis</i> (R.E. King) .....	A	<i>Pseudoleptodus</i> sp. ....	VR
<i>Meekella skenoides</i> Girty .....	A	<i>Reticulariina craticula</i> Cooper and Grant .....	VR
<i>Metriolepis pulvinata</i> Cooper and Grant .....	VR	<i>Rhipidomella hispidula</i> Cooper and Grant .....	C
<i>Paraspiriferina laqueata</i> Cooper and Grant .....	C	<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR
<i>Paraspiriferina rotundata</i> Cooper and Grant .....	VR	LOCALITY N723w : Word Formation, Willis Ranch	
<i>Paucispinifera magnispina</i> Cooper and Grant .....	C	Member	
<i>Paucispinifera transversa</i> Cooper and Grant .....	C	<i>Allorhynchus</i> sp. ....	VR
<i>Pseudodielasma gibberum</i> Cooper and Grant .....	C	<i>Cactosteges anomalus</i> Cooper and Grant .....	VR
<i>Pseudodielasma</i> sp. ....	C	<i>Collemataria</i> sp. ....	R
<i>Reticulariina senticosa</i> Cooper and Grant .....	R	<i>Composita parasulcata</i> Cooper and Grant .....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C	<i>Composita</i> sp. ....	VR
<i>Rhynchopora palumbula</i> Cooper and Grant .....	R	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR
<i>Spiriferella gravis</i> Cooper and Grant .....	R	<i>Costispinifera costata</i> (R.E. King) .....	C
<i>Spiriferellina hilli</i> (Girty) .....	A	<i>Crurithyris tholiaphor</i> Cooper and Grant .....	VR
<i>Texarina elongata</i> Cooper and Grant .....	R	<i>Cyclacantharia kingorum</i> Cooper and Grant .....	C
<i>Tropidelasma anthicum</i> Cooper and Grant .....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	VR
<i>Waagenoconcha magnifica</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	C	<i>Dyoros</i> ( <i>Lissosia</i> ) <i>concavus</i> Cooper and Grant .....	C
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Yakovlevia hessorum</i> Cooper and Grant .....	VR	<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR
LOCALITY N723u : Cathedral Mountain Formation		<i>Enteleles wordensis</i> R.E. King .....	VR
<i>Agelesia triangularis</i> (R.E. King) .....	VA	<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	R
<i>Cartorhium coristum</i> Cooper and Grant .....	VR	<i>Heteralosia hystricula</i> (Girty) .....	R
<i>Chonosteges pulcher</i> Cooper and Grant .....	C	<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Liosotella parva</i> Cooper and Grant .....	C
<i>Collemataria irregularis</i> Cooper and Grant .....	R	<i>Liosotella wordensis</i> (R.E. King) .....	C
<i>Cooperina parva</i> Cooper and Grant .....	R	<i>Meekella calathica</i> Cooper and Grant .....	R
<i>Derbyia complicata</i> Cooper and Grant .....	C	<i>Megousia definita</i> Cooper and Grant .....	R
<i>Derbyia laqueata</i> Cooper and Grant .....	VR	<i>Metriolepis pulvinata</i> Cooper and Grant .....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	VR	<i>Paraspiriferina</i> sp. ....	VR
<i>Echinauris crassa</i> Cooper and Grant .....	VR	<i>Paucispinifera rectangulata</i> Cooper and Grant .....	R
<i>Echinauris irregularis</i> Cooper and Grant .....	C	<i>Paucispinifera</i> sp. ....	R
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR
		<i>Reticulariina</i> sp. ....	R



	Rarity code		Rarity code
LOCALITY N723w - Continued			
<i>Rhamnaria</i> sp. ....	R	<i>Liosotella costata</i> Cooper and Grant.....	A
<i>Rhamnaria vinnula</i> Cooper and Grant.....	VR	<i>Meekella calathica</i> Cooper and Grant.....	A
<i>Rhynchopora palumbula</i> Cooper and Grant.....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	A
<i>Spiriferinaella limata</i> Cooper and Grant.....	VR	<i>Neophricadothyris crassibecca</i> Cooper and Grant.....	R
<i>Stenosisma</i> sp. ....	VR	<i>Neospirifer bakeri bakeri</i> R.E. King.....	C
LOCALITY N723x : Road Canyon Formation			
<i>Crurithyris</i> sp. ....	VR	<i>Neospirifer bakeri columbarius</i> Cooper and Grant.....	R
<i>Cyclacantharia transitoria</i> Cooper and Grant.....	VR	<i>Paraspiriferina pulchra</i> Cooper and Grant.....	VR
<i>Derbyia laqueata</i> Cooper and Grant.....	R	<i>Paucispinifera sulcata</i> Cooper and Grant.....	VR
<i>Dielasma</i> sp. ....	VR	<i>Petasmatherus nitidus</i> Cooper and Grant.....	VR
<i>Dyoros (Dyoros) angulatus</i> Cooper and Grant.....	VR	<i>Phrenophoria</i> sp. ....	VR
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant.....	R	<i>Reticulariina subulata</i> Cooper and Grant.....	VR
<i>Echinauris lappacea</i> Cooper and Grant.....	R	<i>Rhamnaria vinnula</i> Cooper and Grant.....	VR
<i>Edriosteges compactus</i> Cooper and Grant.....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant.....	VR
<i>Hercosestria cribrosa</i> Cooper and Grant.....	VR	<i>Rhynchopora sphenoides</i> Cooper and Grant.....	VR
<i>Hustedia</i> sp. ....	C	<i>Stenosisma bonum</i> Cooper and Grant.....	VR
<i>Liosotella costata</i> Cooper and Grant.....	R	<i>Stenosisma camurum</i> Cooper and Grant.....	VR
<i>Meekella</i> sp. ....	R	<i>Taphroestria peculiaris</i> Cooper and Grant.....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	R	<i>Texarina wordensis</i> (R.E. King).....	VR
<i>Metriolepis ziczac</i> Cooper and Grant.....	VR	<i>Waagenoconcha platys</i> Cooper and Grant.....	VR
<i>Neospirifer bakeri bakeri</i> R.E. King.....	R	<i>Yakovlevia sulcata</i> Cooper and Grant.....	VR
<i>Paucispinifera</i> sp. ....	VR	LOCALITY N724b : Road Canyon Formation	
<i>Paucispinifera sulcata</i> Cooper and Grant.....	VR	<i>Acosarina mesoplatys</i> (R.E. King).....	A
<i>Reticulariina</i> sp. ....	R	<i>Anteridocus seminudus</i> Cooper and Grant.....	C
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR	<i>Bothrostegium derbyoideum</i> Cooper and Grant.....	R
<i>Rhytisia rugosa</i> Cooper and Grant.....	R	<i>Cenorhynchia parvula</i> Cooper and Grant.....	VR
<i>Rugatia paraindica</i> (McKee).....	VR	<i>Chondronia ovalis</i> Cooper and Grant.....	R
<i>Spinarella lobata</i> Cooper and Grant.....	VR	<i>Composita</i> sp. ....	C
<i>Stenosisma</i> sp. ....	VR	<i>Costispinifera rugatula</i> (Girty).....	VR
<i>Taphroestria peculiaris</i> Cooper and Grant.....	R	<i>Cyclacantharia transitoria</i> Cooper and Grant.....	A
<i>Yakovlevia sulcata</i> Cooper and Grant.....	VR	<i>Derbyia cincinnata</i> Cooper and Grant.....	C
LOCALITY N723y : Cathedral Mountain Formation			
<i>Chonosteges variabilis</i> Cooper and Grant.....	VR	<i>Derbyia informis</i> Cooper and Grant.....	VR
<i>Dyoros (Tetragonetes) giganteus</i> Cooper and Grant.....	VR	<i>Derbyia laqueata</i> Cooper and Grant.....	C
<i>Hercosia ugdeni</i> (Böse).....	VR	<i>Derbyia</i> sp. ....	VR
<i>Institella leonardensis</i> (R.E. King).....	VR	<i>Echinauris bella</i> Cooper and Grant.....	VR
<i>Lepidospirifer angulatus</i> Cooper and Grant.....	VR	<i>Echinauris irregularis</i> Cooper and Grant.....	A
<i>Meekella calathica</i> Cooper and Grant.....	VR	<i>Echinauris lappacea</i> Cooper and Grant.....	R
<i>Nudauris linospina</i> Cooper and Grant.....	VR	<i>Echinauris</i> sp. ....	VR
<i>Stenosisma triquetrum</i> Cooper and Grant.....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	C
LOCALITY N724a : Road Canyon Formation			
<i>Acosarina mesoplatys</i> (R.E. King).....	C	<i>Edriosteges</i> sp. ....	VR
<i>Acritosia? vestibula</i> Cooper and Grant.....	VR	<i>Eolyttonia</i> sp. ....	VR
<i>Chondronia ovalis</i> Cooper and Grant.....	VR	<i>Goniarina striata</i> Cooper and Grant.....	VR
<i>Composita crassa</i> Cooper and Grant.....	C	<i>Holotricharina sparsa</i> Cooper and Grant.....	R
<i>Coscinophora magnifica</i> Cooper and Grant.....	R	<i>Hustedia connorsii</i> Cooper and Grant.....	C
<i>Cyclacantharia transitoria</i> Cooper and Grant.....	VR	<i>Kutorginella sullivanensis</i> (R.E. King).....	VR
<i>Derbyia cincinnata</i> Cooper and Grant.....	C	<i>Meekella calathica</i> Cooper and Grant.....	A
<i>Derbyia complicata</i> Cooper and Grant.....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR
<i>Derbyia</i> sp. ....	VR	<i>Metriolepis ziczac</i> Cooper and Grant.....	C
<i>Dielasma ellipsoideum</i> Cooper and Grant.....	VR	<i>Neophricadothyris crassibecca</i> Cooper and Grant.....	C
<i>Dielasma</i> sp. ....	VR	<i>Neospirifer bakeri bakeri</i> R.E. King.....	VR
<i>Dyoros (Dyoros) angulatus</i> Cooper and Grant.....	A	<i>Paucispinifera sulcata</i> Cooper and Grant.....	R
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant.....	R	<i>Peniculauris costata</i> Cooper and Grant.....	VR
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant.....	C	<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR
<i>Echinauris bella</i> Cooper and Grant.....	C	<i>Rhynchopora sphenoides</i> Cooper and Grant.....	VR
<i>Echinauris irregularis</i> Cooper and Grant.....	R	<i>Rugatia incurvata</i> (R.E. King).....	R
<i>Edriosteges compactus</i> Cooper and Grant.....	C	<i>Stenosisma bonum</i> Cooper and Grant.....	C
<i>Eolyttonia</i> sp. ....	VR	<i>Taphroestria expansa</i> Cooper and Grant.....	C
<i>Heterelasma glansfagea</i> Cooper and Grant.....	R	<i>Taphroestria peculiaris</i> Cooper and Grant.....	VR
<i>Holotricharina sparsa</i> Cooper and Grant.....	VR	<i>Texarina wordensis</i> (R.E. King).....	VR
<i>Hustedia consuta</i> Cooper and Grant.....	C	<i>Waagenoconcha convexa</i> Cooper and Grant.....	VR
LOCALITY N724c : Road Canyon Formation			
		<i>Acanthocrania densispina</i> Cooper and Grant.....	VR
		<i>Acosarina mesoplatys</i> (R.E. King).....	C
		<i>Chondronia ovalis</i> Cooper and Grant.....	VR
		<i>Chonetinetes angustisulcatus</i> Cooper and Grant.....	C

	Rarity code		Rarity code
LOCALITY N724c - Continued		LOCALITY N724j : Road Canyon Formation	
<i>Collemataria batilliformis</i> Cooper and Grant .....	C	<i>Acanthocrania densispina</i> Cooper and Grant .....	VR
<i>Collemataria</i> sp. ....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	VA
<i>Composita</i> sp. ....	C	<i>Acritosia magnifica</i> Cooper and Grant .....	VR
<i>Cooperina subcuneata</i> Cooper and Grant .....	R	<i>Cenorhynchia atmata</i> Cooper and Grant .....	C
<i>Coscinophora magnifica</i> Cooper and Grant .....	R	<i>Collemataria</i> sp. ....	VR
<i>Crurithyris</i> sp. ....	VR	<i>Composita pilula</i> Cooper and Grant .....	A
<i>Cyclacantharia transitoria</i> Cooper and Grant .....	C	<i>Composita</i> sp. ....	VR
<i>Derbyia cincinnata</i> Cooper and Grant .....	R	<i>Crurithyris minutalis</i> Cooper and Grant .....	C
<i>Derbyia laqueata</i> Cooper and Grant .....	R	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	VR	<i>Derbyia informis</i> Cooper and Grant .....	VR
<i>Dyoros (Dyoros) transversus</i> Cooper and Grant .....	C	<i>Derbyia laqueata</i> Cooper and Grant .....	R
<i>Echinauris lappacea</i> Cooper and Grant .....	C	<i>Derbyia</i> sp. ....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	R	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR
<i>Enteleles densus</i> Cooper and Grant .....	VR	<i>Echinauris bella</i> Cooper and Grant .....	C
<i>Goniarina</i> sp. ....	VR	<i>Echinauris irregularis</i> Cooper and Grant .....	R
<i>Heteralosia hystricula</i> (Girty) .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Heteralosia</i> sp. ....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C
<i>Hustedia consuta</i> Cooper and Grant .....	A	<i>Elassonia micraria</i> Cooper and Grant .....	C
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Holotricharina sparsa</i> Cooper and Grant .....	VR
<i>Liosotella costata</i> Cooper and Grant .....	VR	<i>Hustedia narinosa</i> Cooper and Grant .....	VA
<i>Meekella calathica</i> Cooper and Grant .....	C	<i>Kutorginella sullivanensis</i> (R.E. King) .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	R	<i>Meekella calathica</i> Cooper and Grant .....	C
<i>Metriolepis ziczac</i> Cooper and Grant .....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Neophricadothyris crassibecca</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	C
<i>Neospirifer formulosus</i> Cooper and Grant .....	R	<i>Neophricadothyris crassibecca</i> Cooper and Grant .....	VR
<i>Paraspiriferina cellulana</i> Cooper and Grant .....	VR	<i>Neospirifer thescelus</i> Cooper and Grant .....	R
<i>Paucispinifera sulcata</i> Cooper and Grant .....	C	<i>Paraspiriferina cellulana</i> Cooper and Grant .....	VR
<i>Peniculauris costata</i> Cooper and Grant .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	R
<i>Petasmatherus pumilus</i> Cooper and Grant .....	C	<i>Peniculauris costata</i> Cooper and Grant .....	VR
<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	VR	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR
<i>Pseudodielasma</i> sp. ....	VR	<i>Rhynchopora sphenoides</i> Cooper and Grant .....	VR
<i>Pseudoleptodus?</i> sp. 7 .....	VR	<i>Spiriferella</i> sp. ....	VR
<i>Rhamnaria vinnula</i> Cooper and Grant .....	C	<i>Stenosisma bonum</i> Cooper and Grant .....	A
<i>Rhytisia rugosa</i> Cooper and Grant .....	A	<i>Texarina wordensis</i> (R.E. King) .....	R
<i>Stenosisma</i> sp. ....	VR	<i>Waagenoconcha convexa</i> Cooper and Grant .....	VR
<i>Tropidelasma corniculum</i> Cooper and Grant .....	R		
<i>Xenosteges trivialis</i> Cooper and Grant .....	A	LOCALITY N724k : Cathedral Mountain Formation	
		<i>Xestosia schucherti</i> (R.E. King) .....	VR
LOCALITY N724d : Road Canyon Formation		LOCALITY N724-l : Skinner Ranch Formation	
<i>Acosarina mesoplatys</i> (R.E. King) .....	R	<i>Enteleles</i> sp. ....	VR
<i>Acritosia? vestibula</i> Cooper and Grant .....	VR	<i>Glyptosteges angustus</i> (R.E. King) .....	VR
<i>Composita pilula</i> Cooper and Grant .....	VR	<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR
<i>Coscinophora magnifica</i> Cooper and Grant .....	C	<i>Neophricadothyris</i> sp. ....	VR
<i>Derbyia cincinnata</i> Cooper and Grant .....	VR	<i>Torynechus alectorius</i> Cooper and Grant .....	R
<i>Derbyia laqueata</i> Cooper and Grant .....	R		
<i>Dielasma bellulum</i> Cooper and Grant .....	C	LOCALITY N724m : Cathedral Mountain Formation	
<i>Dielasma</i> sp. ....	R	<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Echinauris crassa</i> Cooper and Grant .....	R	<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR
<i>Edriosteges compactus</i> Cooper and Grant .....	VR		
<i>Enteleles densus</i> Cooper and Grant .....	C	LOCALITY N724n : Cathedral Mountain Formation	
<i>Heterelasma magnum</i> Cooper and Grant .....	VR	<i>Hercosia uddeni</i> (Böse) .....	VR
<i>Hustedia</i> sp. ....	VR	<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	VR	<i>Kochiproductus</i> sp. ....	VR
<i>Neospirifer formulosus</i> Cooper and Grant .....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Notothyris planiplicata</i> Cooper and Grant .....	R	<i>Torynechus caelatus</i> Cooper and Grant .....	VR
<i>Rhamnaria vinnula</i> Cooper and Grant .....	R	<i>Xestosia schucherti</i> (R.E. King) .....	R
<i>Stenosisma</i> sp. ....	VR		
<i>Tropidelasma corniculum</i> Cooper and Grant .....	A	LOCALITY N724p : Skinner Ranch Formation	
		<i>Acosarina dorsisulcata</i> Cooper and Grant .....	C
LOCALITY N724i : Cathedral Mountain Formation		<i>Antronaria dissona</i> Cooper and Grant .....	C
<i>Institella leonardensis</i> (R.E. King) .....	VR	<i>Composita</i> sp. ....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR	<i>Crurithyris</i> sp. ....	R
<i>Nudauris linospina</i> Cooper and Grant .....	VR	<i>Derbyia nasuta</i> Girty .....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	R	<i>Dielasma</i> sp. ....	VR

	Rarity code		Rarity code
LOCALITY N724p - Continued			
<i>Elliottella varicostata</i> Cooper and Grant.....	A	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	C
<i>Enteleles stehlii</i> Cooper and Grant .....	C	<i>Costispinifera costata</i> (R.E. King) .....	C
<i>Hystriaculina pumila</i> Cooper and Grant.....	VR	<i>Crurithyris tholiaphor</i> Cooper and Grant.....	R
<i>Kozlowskia subsphaeroidalis</i> Cooper and Grant .....	A	<i>Cyclacantharia kingorum</i> Cooper and Grant.....	A
<i>Meekella caperata</i> Cooper and Grant.....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	VR
<i>Meekella hessensis</i> R.E. King.....	R	<i>Derbyia pannucia</i> Cooper and Grant .....	R
<i>Rhipidomella hessensis</i> R.E. King.....	A	<i>Derbyia texta</i> Cooper and Grant.....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	A	<i>Dielasma compactum</i> Cooper and Grant .....	R
<i>Spinifrons delicatula</i> Cooper and Grant .....	VR	<i>Dielasma gracile</i> Cooper and Grant.....	R
<i>Stenosisma hadrum</i> Cooper and Grant.....	VR	<i>Dielasma</i> sp. ....	R
<i>Teguliferina conida</i> (Stehli) .....	R	<i>Dielasma zebratum</i> Cooper and Grant.....	R
LOCALITY N724q : Skinner Ranch Formation			
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	C
<i>Anomalesia perplexa</i> Cooper and Grant .....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>tenuis</i> Cooper and Grant .....	R
<i>Antronaria dissona</i> Cooper and Grant.....	R	<i>Dyoros</i> ( <i>Lissosia</i> ) <i>concavus</i> Cooper and Grant.....	C
<i>Chonetinella biplicata</i> (R.E. King).....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	C
<i>Composita apheles</i> Cooper and Grant .....	VR	<i>Echinosteges tuberculatus</i> (R.E. King) .....	C
<i>Crenispirifer angulatus</i> (R.E. King).....	VR	<i>Enteleles</i> sp. ....	VR
<i>Crurithyris</i> sp. ....	R	<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	VR
<i>Enteleles</i> sp. ....	R	<i>Grandaurispina bella</i> Cooper and Grant .....	R
<i>Fimbrinia ovata</i> Cooper and Grant.....	VR	<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	C
<i>Hustedia catella</i> Cooper and Grant.....	R	<i>Heteralosia hystriacula</i> (Girty).....	C
<i>Hustedia hessensis</i> R.E. King.....	VR	<i>Heterelasma concavum</i> Cooper and Grant.....	R
<i>Hystriaculina pumila</i> Cooper and Grant.....	C	<i>Hustedia pugilla pugilla</i> Cooper and Grant.....	A
<i>Kozlowskia subsphaeroidalis</i> Cooper and Grant .....	C	<i>Hustedia sculptilis</i> Cooper and Grant.....	R
<i>Meekella</i> sp. ....	VR	<i>Leurosina lata</i> Cooper and Grant .....	R
<i>Pontisia costata</i> Cooper and Grant .....	R	<i>Liosotella wordensis</i> (R.E. King) .....	A
<i>Rhipidomella hessensis</i> R.E. King.....	R	<i>Meekella skenoides</i> Girty .....	A
<i>Scacchinella titan</i> Cooper and Grant .....	R	<i>Metriolepis pulvinata</i> Cooper and Grant .....	R
<i>Tautosia fastigiata</i> Cooper and Grant .....	VR	<i>Metriolepis</i> sp. ....	VR
LOCALITY N724r : Cathedral Mountain Formation			
<i>Enteleles plummeri</i> R.E. King .....	VR	<i>Neospirifer amphigyus</i> Cooper and Grant .....	R
<i>Institella leonardensis</i> (R.E. King).....	VR	<i>Paraspiriferina setulosa</i> Cooper and Grant.....	C
<i>Rugatia paraindica</i> (McKee) .....	VR	<i>Paucispinifera auriculata</i> Muir-Wood and Cooper.....	C
<i>Torynechus caelatus</i> Cooper and Grant .....	VR	<i>Paucispinifera magnispina</i> Cooper and Grant .....	R
<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	VR	<i>Paucispinifera transversa</i> Cooper and Grant.....	VR
LOCALITY N724s : Cathedral Mountain Formation			
<i>Enteleles leonardensis</i> R.E. King .....	VR	<i>Petasmatherus opulus</i> Cooper and Grant .....	R
<i>Enteleles plummeri</i> R.E. King .....	VR	<i>Polymorpharia polymorpha</i> Cooper and Grant.....	VR
<i>Institella leonardensis</i> (R.E. King).....	R	<i>Pseudodielasma gibberum</i> Cooper and Grant.....	R
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR	<i>Pseudodielasma lobatum</i> Cooper and Grant.....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR	<i>Pseudodielasma minor</i> (R.E. King).....	C
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Pseudodielasma pingue</i> Cooper and Grant .....	R
<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR	<i>Pseudodielasma</i> sp. ....	VA
<i>Thamnosia anterospinosa</i> Cooper and Grant.....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Torynechus caelatus</i> Cooper and Grant .....	VR	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C
LOCALITY N724t : Cathedral Mountain Formation			
<i>Enteleles leonardensis</i> R.E. King .....	VR	<i>Rhynchopora palumbula</i> Cooper and Grant.....	R
<i>Institella leonardensis</i> (R.E. King).....	VR	<i>Spiriferella calcarata</i> Cooper and Grant.....	R
<i>Neophricadothyris bullata</i> Cooper and Grant.....	VR	<i>Spiriferellina hilli</i> (Girty).....	R
LOCALITY N724u : Word Formation, Willis Ranch			
Member		<i>Texarina elongata</i> Cooper and Grant .....	VR
<i>Acanthocrania intermedia</i> Cooper and Grant.....	VR	<i>Thedusia procera</i> Cooper and Grant .....	R
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	R	<i>Undulella undulata</i> Cooper and Grant .....	C
<i>Allorhynchus triangulatum</i> Cooper and Grant.....	VR	<i>Wellerella girtyi girtyi</i> Cooper and Grant.....	A
<i>Cactosteges anomalus</i> Cooper and Grant .....	A	<i>Xenosteges quadratus</i> Cooper and Grant .....	R
<i>Cartorhium chelomatium</i> Cooper and Grant.....	R	<i>Yakovlevia hessorum</i> Cooper and Grant .....	VR
<i>Cartorhium</i> sp. ....	VR	LOCALITY N724x : Lenox Hills Formation	
<i>Collemataria elongata</i> Cooper and Grant.....	C	<i>Acosarina</i> sp. ....	R
<i>Composita enormis</i> Cooper and Grant .....	R	LOCALITY N725a : Hueco Formation	
<i>Composita parasulcata</i> Cooper and Grant.....	A	<i>Acosarina</i> sp. ....	A
		<i>Composita mexicana</i> (Hall) .....	VA
		<i>Crurithyris sulcata</i> Stehli .....	C
		<i>Derbyia</i> sp. ....	VR
		<i>Enteleles stellatus</i> Cooper and Grant.....	R
		<i>Enteleles</i> sp. ....	C
		<i>Meekella circularis</i> Cooper and Grant.....	R
		<i>Meekella</i> sp. ....	R
		<i>Orthotichia kozlowskii</i> R.E. King.....	VR

	Rarity code		Rarity code
LOCALITY N725a - Continued		<i>Cleiothyridina pilularis</i> Cooper and Grant .....	R
<i>Reticulatia</i> sp. ....	VR	<i>Collemataria spatulata</i> Cooper and Grant .....	C
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Composita affinis</i> Girty .....	A
<i>Rhipidomella</i> sp. ....	VR	<i>Crenispirifer myllus</i> Cooper and Grant .....	C
<i>Scacchinella exasperata</i> Cooper and Grant .....	VR	<i>Crurithyris guadalupensis</i> (Girty) .....	C
LOCALITY N725b : Hueco Formation		<i>Deltarina magnicostata</i> Cooper and Grant .....	C
<i>Acritosia silicica</i> Cooper and Grant .....	A	<i>Derbyia</i> sp. 1 .....	R
<i>Composita cracens</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	C
<i>Composita mexicana</i> (Hall) .....	C	<i>Derbyia texta</i> Cooper and Grant .....	R
<i>Enteleles</i> sp. ....	C	<i>Dielasma cordatum</i> Girty .....	VR
<i>Lowenstamia</i> sp. ....	C	<i>Dielasma</i> sp. ....	R
<i>Meekella circularis</i> Cooper and Grant .....	C	<i>Dielasma sulcatum</i> Girty .....	R
<i>Meekella</i> sp. ....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>hillanus</i> (Girty) .....	R
<i>Neophricadothyris catatona</i> Cooper and Grant .....	VR	<i>Eliva shumardi</i> Cooper and Grant .....	C
<i>Texarina</i> sp. ....	R	<i>Elivina detecta</i> Cooper and Grant .....	C
LOCALITY N725c : Bone Spring Formation		<i>Eolyttonia</i> sp. ....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	A	<i>Fascicosta longaeva</i> (Girty) .....	VR
<i>Acritosia peculiaris</i> Cooper and Grant .....	C	<i>Geyerella americana</i> Girty .....	VR
<i>Antronaria indentata</i> Cooper and Grant .....	C	<i>Heteralosia magnispina</i> Cooper and Grant .....	R
<i>Antronaria mesicostalis</i> (Girty) .....	VR	<i>Heterelasma venustulum</i> Girty .....	VR
<i>Chonetinella magna</i> Cooper and Grant .....	C	<i>Hustedia rupinata</i> Cooper and Grant .....	A
<i>Collemataria americana</i> (Girty) .....	VR	<i>Lirellaria costellata</i> Cooper and Grant .....	VR
<i>Collemataria marshalli</i> (Stehli) .....	R	<i>Martinia rhomboidalis</i> Girty .....	VA
<i>Crenispirifer angulatus</i> (R.E. King) .....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Crurithyris inflata</i> Stehli .....	R	<i>Micraphelia</i> sp. ....	VR
<i>Crurithyris sulcata</i> Stehli .....	R	<i>Ombonia guadalupensis</i> (Girty) .....	C
<i>Derbyia nasuta</i> Girty .....	R	<i>Paraspiriferina sapinea</i> Cooper and Grant .....	C
<i>Derbyia</i> sp. ....	R	<i>Paraspiriferina</i> sp. ....	VR
<i>Dielasma</i> sp. ....	VR	<i>Paucispinifera latidorsata</i> (Girty) .....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	VR	<i>Plectelasma guadalupense</i> (Girty) .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty) .....	R	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>magnus</i> Stehli .....	VR	<i>Reticulariina</i> sp. ....	R
<i>Enteleles stehlii</i> Cooper and Grant .....	A	<i>Rigbyella girtyi</i> (Wanner and Sieverts) .....	VR
<i>Fimbrinia ovata</i> Cooper and Grant .....	VR	<i>Sarganostega pressa</i> Cooper and Grant .....	C
<i>Goniarina permiana</i> (Stehli) .....	A	<i>Scapharina levis</i> Cooper and Grant .....	VR
<i>Hustedia hessensis</i> R.E. King .....	R	<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	R	<i>Spiriferellina nuda</i> Cooper and Grant .....	VR
<i>Kozlowskia kingi</i> Stehli .....	R	<i>Stenosisma trabeatum</i> Cooper and Grant .....	R
<i>Limbella victorioensis</i> Stehli .....	R	<i>Strigirhynchia indentata</i> (Shumard) .....	VR
<i>Meekella angustiplicata</i> Cooper and Grant .....	A	<i>Tautosia elegans</i> (Girty) .....	C
<i>Meekella attenuata</i> Girty .....	R	<i>Tautosia shumardiana</i> (Girty) .....	R
<i>Meekella hessensis</i> R.E. King .....	R	<i>Thamnosia capitaneensis</i> (Girty) .....	VR
<i>Meekella intermedia</i> Cooper and Grant .....	R	<i>Timorina ovata</i> (Girty) .....	R
<i>Neophricadothyris catatona</i> Cooper and Grant .....	C	<i>Timorina schuchertensis</i> (Girty) .....	VR
<i>Neophricadothyris</i> sp. ....	VR	<i>Tropidelasma gregarium</i> (Girty) .....	A
<i>Pontisia nanas</i> (Stehli) .....	VR	LOCALITY N725f : Bell Canyon Formation, Rader	
<i>Rhipidomella hessensis</i> R.E. King .....	C	Member	
<i>Scacchinella americana</i> Stehli .....	C	<i>Acanthocrania regularis</i> Cooper and Grant .....	R
<i>Sceletonia crassa</i> Cooper and Grant .....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant .....	C
<i>Spinifrons quadrata</i> Stehli .....	VR	<i>Altiplecus trapezoidalis</i> Cooper and Grant .....	C
<i>Teguliferina conida</i> (Stehli) .....	R	<i>Anteridocus swalloviaus</i> (Shumard) .....	C
<i>Thamnosia parvispinosa</i> (Stehli) .....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	VA
LOCALITY N725e : Bell Canyon Formation, Lamar		<i>Cartorhium</i> sp. ....	VR
Member		<i>Chonetinetes varians</i> Cooper and Grant .....	C
<i>Allorhynchus venustulum</i> Cooper and Grant .....	R	<i>Composita affinis</i> Girty .....	C
<i>Aneuthelasma amygdalinum</i> Cooper and Grant .....	R	<i>Craspedona newelli</i> Cooper and Grant .....	C
<i>Anomaloria anomala</i> Cooper and Grant .....	A	<i>Crenispirifer myllus</i> Cooper and Grant .....	C
<i>Anteridocus bicostatus</i> Cooper and Grant .....	VR	<i>Deltarina magnicostata</i> Cooper and Grant .....	R
<i>Anteridocus swalloviaus</i> (Shumard) .....	R	<i>Derbyia</i> sp. ....	C
<i>Aphaurosia rotundata</i> Cooper and Grant .....	C	<i>Derbyia texta</i> Cooper and Grant .....	C
<i>Aphaurosia scutata</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	C	<i>Dielasma subcirculare</i> Cooper and Grant .....	R
<i>Astegosia subquadrata</i> (Girty) .....	VA		

	Rarity code		Rarity code
LOCALITY N725f - Continued			
<i>Dielasma sulcatum</i> Girty .....	R	<i>Derbyia</i> sp. ....	R
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	A	<i>Derbyia texta</i> Cooper and Grant .....	R
<i>Echinosteges guadalupensis</i> (Shumard) .....	R	<i>Dielasma</i> sp. ....	VR
<i>Eliva shumardi</i> Cooper and Grant .....	VR	<i>Dielasma sulcatum</i> Girty .....	VR
<i>Elivina? annectans</i> Cooper and Grant .....	C	<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	C
<i>Eolyttonia</i> sp. ....	VR	<i>Echinosteges guadalupensis</i> (Shumard) .....	VR
<i>Fascicosta bella</i> Cooper and Grant .....	VR	<i>Elivina? annectans</i> Cooper and Grant .....	R
<i>Fascicosta elongata</i> Cooper and Grant .....	R	<i>Fascicosta bella</i> Cooper and Grant .....	VR
<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant .....	R	<i>Fascicosta elongata</i> Cooper and Grant .....	VR
<i>Glossothyropsis juvenis</i> Cooper and Grant .....	VR	<i>Fascicosta longaeva</i> (Girty) .....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	C	<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant .....	C
<i>Heterelasma venustulum</i> Girty .....	VR	<i>Glossothyropsis juvenis</i> Cooper and Grant .....	VR
<i>Hustedia demissa</i> Cooper and Grant .....	C	<i>Heteralosia magnispina</i> Cooper and Grant .....	R
<i>Hustedia rupinata</i> Cooper and Grant .....	VA	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Lepidocrania</i> sp. ....	VR	<i>Hustedia demissa</i> Cooper and Grant .....	R
<i>Madarosia anterolamellata</i> Cooper and Grant .....	R	<i>Hustedia rupinata</i> Cooper and Grant .....	C
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Hustedia</i> sp. ....	A
<i>Metriolepis pedicosa</i> Cooper and Grant .....	R	<i>Metriolepis nabis</i> Cooper and Grant .....	VR
<i>Metriolepis</i> sp. ....	R	<i>Metriolepis pedicosa</i> Cooper and Grant .....	R
<i>Micraphelia scitula</i> Cooper and Grant .....	A	<i>Metriolepis</i> sp. ....	VR
<i>Micraphelia subalata</i> Cooper and Grant .....	VA	<i>Micraphelia scitula</i> Cooper and Grant .....	C
<i>Neophricadothyris</i> sp. ....	VR	<i>Micraphelia subalata</i> Cooper and Grant .....	A
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	C	<i>Notothyris</i> sp. ....	VR
<i>Paucispinifera</i> sp. ....	R	<i>Ombonia guadalupensis</i> (Girty) .....	VR
<i>Petrocrania</i> sp. ....	VR	<i>Paraspiriferina billingsi</i> (Shumard) .....	R
<i>Phrenophoria perplexa</i> Cooper and Grant .....	R	<i>Paraspiriferina sapinea</i> Cooper and Grant .....	C
<i>Plectelasma guadalupense</i> (Girty) .....	C	<i>Paucispinifera latidorsata</i> (Girty) .....	VR
<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	C	<i>Phrenophoria perplexa</i> Cooper and Grant .....	R
<i>Rallacosta imporcata</i> Cooper and Grant .....	C	<i>Plectelasma guadalupense</i> (Girty) .....	R
<i>Reticulariina echinata</i> Cooper and Grant .....	R	<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	VR
<i>Reticulariina</i> sp. ....	C	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR
<i>Reticulariina welleri</i> (Girty) .....	VR	<i>Rallacosta imporcata</i> Cooper and Grant .....	R
<i>Rhamnaria shumardi</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Sarganostega transversalis</i> Cooper and Grant .....	R	<i>Reticulariina welleri</i> (Girty) .....	VR
<i>Scapharina levis</i> Cooper and Grant .....	VR	<i>Sarganostega transversalis</i> Cooper and Grant .....	R
<i>Scapharina rugosa</i> Cooper and Grant .....	C	<i>Scapharina levis</i> Cooper and Grant .....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	A	<i>Scapharina rugosa</i> Cooper and Grant .....	R
<i>Spiriferella sulcifer</i> (Shumard) .....	C	<i>Sestropoma cribriferum</i> Cooper and Grant .....	R
<i>Stenoscisma aberrans</i> Cooper and Grant .....	R	<i>Spiriferella sulcifer</i> (Shumard) .....	C
<i>Stenoscisma trabeatum</i> Cooper and Grant .....	VR	<i>Spiriferellina nuda</i> Cooper and Grant .....	R
<i>Thamnosia capitanensis</i> (Girty) .....	R	<i>Tautosia elegans</i> (Girty) .....	VR
<i>Timorina ovata</i> (Girty) .....	VR	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Timorina schuchertensis</i> (Girty) .....	VR	<i>Tautosia</i> sp. ....	VR
<i>Tropidelasma gregarium</i> (Girty) .....	VR	<i>Thamnosia capitanensis</i> (Girty) .....	VR
<i>Xenosteges umbonatus</i> Cooper and Grant .....	VR	<i>Theodusia trigonalis</i> (Girty) .....	R
		<i>Theodusia ventricosa</i> Cooper and Grant .....	C
		<i>Tropidelasma gregarium</i> (Girty) .....	VR
LOCALITY N725g : Bell Canyon Formation, Rader Member		LOCALITY N725h : Bell Canyon Formation, Pinery Member	
<i>Acanthocrania</i> sp. ....	VR	<i>Acanthocrania minutispinosa</i> Cooper and Grant .....	VR
<i>Allorhynchus venustulum</i> Cooper and Grant .....	VR	<i>Allorhynchus venustulum</i> Cooper and Grant .....	VR
<i>Altiplecus? deltosus</i> Cooper and Grant .....	R	<i>Altiplecus extensus</i> Cooper and Grant .....	VR
<i>Anteridocus swallowianus</i> (Shumard) .....	C	<i>Anteridocus swallowianus</i> (Shumard) .....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	<i>Aphaurosia scutata</i> Cooper and Grant .....	VR
<i>Bryorhynchus bisulcatum</i> (Shumard) .....	A	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	VA
<i>Cartorhium</i> sp. ....	VR	<i>Composita pyriformis</i> Cooper and Grant .....	R
<i>Chonetinetes</i> sp. ....	R	<i>Composita</i> sp. ....	R
<i>Composita emarginata</i> Girty .....	C	<i>Craspedona newelli</i> Cooper and Grant .....	VR
<i>Composita pyriformis</i> Cooper and Grant .....	R	<i>Crenispirifer jubatus</i> Cooper and Grant .....	R
<i>Composita</i> sp. ....	VR	<i>Deltarina magnicostata</i> Cooper and Grant .....	VR
<i>Craspedona newelli</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	R
<i>Crenispirifer myllus</i> Cooper and Grant .....	C	<i>Dielasma cordatum</i> Girty .....	VR
<i>Crurithyris guadalupensis</i> (Girty) .....	VR	<i>Dielasma</i> sp. ....	VR



	Rarity code		Rarity code
LOCALITY N725h - Continued		<i>Liosotella popei</i> (Shumard) .....	A
<i>Elivina? annectans</i> Cooper and Grant .....	R	<i>Paraspiriferina billingsi</i> (Shumard) .....	VR
<i>Fascicosta elongata</i> Cooper and Grant .....	VR	<i>Stenosisma obliquum</i> Cooper and Grant .....	VR
<i>Glossothyropsis polita</i> Cooper and Grant .....	C	<i>Strigirhynchia indentata</i> (Shumard) .....	VR
<i>Glossothyropsis robusta</i> (Girty) .....	VR	<i>Strigirhynchia transversa</i> Cooper and Grant .....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	VR	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Heterelasma</i> sp. ....	VR	<i>Thamnosia capitanensis</i> (Girty) .....	R
<i>Heterelasma venustum</i> Girty .....	VR	LOCALITY N725m : Capitan Formation	
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Cartorhium mexicanum</i> (Shumard) .....	VR
<i>Hustedia samia</i> Cooper and Grant .....	R	LOCALITY N725n : Bell Canyon Formation, Pinery	
<i>Hustedia</i> sp. ....	C	Member	
<i>Metriolepis pedicosa</i> Cooper and Grant .....	VR	<i>Acanthocrania minutispinosa</i> Cooper and Grant .....	VR
<i>Micraphelia scitula</i> Cooper and Grant .....	VA	<i>Acanthocrania</i> sp. ....	VR
<i>Micraphelia subalata</i> Cooper and Grant .....	C	<i>Altiplecus? deltosus</i> Cooper and Grant .....	C
<i>Neophricadothyris</i> sp. ....	VR	<i>Anteridocus subcarinatus</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	<i>Anteridocus swallowianus</i> (Shumard) .....	R
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	R	<i>Arionthia lamaria</i> Cooper and Grant .....	VR
<i>Paucispiniifera rara</i> Cooper and Grant .....	VR	<i>Arionthia polypleura</i> (Girty) .....	R
<i>Petrocrania exasperata</i> Cooper and Grant .....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	C
<i>Petrocrania septifera</i> Cooper and Grant .....	VR	<i>Composita emarginata</i> Girty .....	C
<i>Plectelasma guadalupense</i> (Girty) .....	R	<i>Composita pyriformis</i> Cooper and Grant .....	VR
<i>Pseudodielasma brilli</i> Cooper and Grant .....	VR	<i>Crenispirifer jubatus</i> Cooper and Grant .....	R
<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	VR	<i>Deltarina magnicostata</i> Cooper and Grant .....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Derbyia</i> sp. ....	C
<i>Rigbyella girtyi</i> (Wanner and Sieverts) .....	VR	<i>Dielasma sulcatum</i> Girty .....	R
<i>Sarganostega pressa</i> Cooper and Grant .....	VR	<i>Echinosteges guadalupensis</i> (Shumard) .....	VR
<i>Scapharina rugosa</i> Cooper and Grant .....	R	<i>Elivina? annectans</i> Cooper and Grant .....	C
<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR	<i>Fascicosta longaeva</i> (Girty) .....	VR
<i>Spiriferellina nuda</i> Cooper and Grant .....	R	<i>Glossothyropsis polita</i> Cooper and Grant .....	VR
<i>Thamnosia capitanensis</i> (Girty) .....	VR	<i>Heteralosia magnispina</i> Cooper and Grant .....	VR
<i>Thedusia trigonalis</i> (Girty) .....	VR	<i>Hustedia demissa</i> Cooper and Grant .....	VR
<i>Timorina attenuata</i> Cooper and Grant .....	VR	<i>Hustedia rupinata</i> Cooper and Grant .....	A
LOCALITY N725i : Capitan Formation		<i>Hustedia samia</i> Cooper and Grant .....	R
<i>Eliva shumardi</i> Cooper and Grant .....	VR	<i>Metriolepis nabis</i> Cooper and Grant .....	VR
<i>Liosotella popei</i> (Shumard) .....	R	<i>Metriolepis pedicosa</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Scapharina rugosa</i> Cooper and Grant .....	VR	<i>Micraphelia scitula</i> Cooper and Grant .....	R
<i>Strigirhynchia indentata</i> (Shumard) .....	VR	<i>Paraspiriferina sapinea</i> Cooper and Grant .....	R
LOCALITY N725j : Capitan Formation		<i>Paucispiniifera</i> sp. ....	VR
<i>Anteridocus swallowianus</i> (Shumard) .....	VR	<i>Phrenophoria perplexa</i> Cooper and Grant .....	VR
<i>Liosotella popei</i> (Shumard) .....	VR	<i>Phrenophoria pinguis</i> (Girty) .....	VR
<i>Ptilorhynchus delicatum</i> Cooper and Grant .....	VR	<i>Plectelasma guadalupense</i> (Girty) .....	R
LOCALITY N725k : Capitan Formation		<i>Plectelasma planidorsatum</i> Cooper and Grant .....	VR
<i>Anteridocus swallowianus</i> (Shumard) .....	C	<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	VR
<i>Composita affinis</i> Girty .....	VR	<i>Rallacosta importata</i> Cooper and Grant .....	VR
<i>Dielasma prolongatum</i> Girty .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Eliva shumardi</i> Cooper and Grant .....	R	<i>Sarganostega transversalis</i> Cooper and Grant .....	R
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Scapharina rugosa</i> Cooper and Grant .....	R
<i>Hustedia rupinata</i> Cooper and Grant .....	VR	<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR
<i>Liosotella popei</i> (Shumard) .....	C	<i>Spiriferella sulcifer</i> (Shumard) .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	<i>Spiriferellina nuda</i> Cooper and Grant .....	R
<i>Scapharina levis</i> Cooper and Grant .....	VR	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Strigirhynchia transversa</i> Cooper and Grant .....	VR	<i>Thamnosia capitanensis</i> (Girty) .....	VR
LOCALITY N725-l : Capitan Formation		<i>Thedusia emarginata</i> Cooper and Grant .....	VR
<i>Anteridocus swallowianus</i> (Shumard) .....	C	<i>Thedusia trigonalis</i> (Girty) .....	R
<i>Composita affinis</i> Girty .....	VR	<i>Thedusia ventricosa</i> Cooper and Grant .....	C
<i>Composita emarginata</i> Girty .....	R	LOCALITY N725o : Bell Canyon Formation, Rader	
<i>Dielasma prolongatum</i> Girty .....	VR	Member	
<i>Eliva inflata</i> Cooper and Grant .....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	C
<i>Eliva shumardi</i> Cooper and Grant .....	R	<i>Composita emarginata</i> Girty .....	R
<i>Eolyttonia</i> sp. 4 .....	VR	<i>Crenispirifer myllus</i> Cooper and Grant .....	VR
<i>Hustedia opsia</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
		<i>Dielasma</i> sp. ....	VR



	Rarity code		Rarity code
LOCALITY N725o - Continued			
<i>Dielasma sulcatum</i> Girty .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	VR	<i>Glossothyropsis</i> sp. 1 (Girty) .....	VR
<i>Elivina? annectans</i> Cooper and Grant .....	C	<i>Isogramma diabloense</i> Cooper and Grant .....	R
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Kochiproductus</i> sp. ....	VR
<i>Metriolepis</i> sp. ....	VR	<i>Leurosina sinesulca</i> (Stehli) .....	R
<i>Micraphelia scitula</i> Cooper and Grant .....	R	<i>Meekella hessensis</i> R.E. King .....	VR
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	R	LOCALITY N725z : Hueco Formation	
<i>Plectelasma guadalupense</i> (Girty) .....	VR	<i>Composita cracens</i> Cooper and Grant .....	R
<i>Reticulariina</i> sp. ....	C	<i>Composita</i> sp. ....	R
<i>Reticulariina welleri</i> (Girty) .....	VR	<i>Dasysaria wolfcampensis</i> (R.E. King) .....	C
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Scapharina rugosa</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. 3 .....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR	<i>Echinauris</i> cf. <i>bouleii</i> (Kozlowski) .....	R
<i>Spiriferella sulcifer</i> (Shumard) .....	VR	<i>Echinauris</i> sp. ....	R
<i>Thedusia trigonalis</i> (Girty) .....	R	<i>Enteleles costellatus</i> Cooper and Grant .....	R
LOCALITY N725p : Capitan Formation		<i>Gypospirifer anancites</i> Cooper and Grant .....	C
<i>Astegosia subquadrata</i> (Girty) .....	R	<i>Hustedia huecoensis</i> R.E. King .....	VR
<i>Collemataria</i> sp. ....	VR	<i>Hustedia</i> sp. ....	R
<i>Composita affinis</i> Girty .....	VR	<i>Kochiproductus quadratus</i> Cooper and Grant .....	C
<i>Eliva inflata</i> Cooper and Grant .....	VR	<i>Kutorginella</i> sp. ....	VR
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Nudauris transversa</i> Cooper and Grant .....	C
<i>Hustedia opsia</i> Cooper and Grant .....	VR	<i>Pontisia franklinensis</i> Cooper and Grant .....	R
<i>Martinia rhomboidalis</i> Girty .....	VR	<i>Reticulariina powwowensis</i> Cooper and Grant .....	VR
<i>Ombonia guadalupensis</i> (Girty) .....	VR	<i>Waagenoconcha sulcata</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	LOCALITY N726c : Road Canyon Formation	
<i>Paucispinifera</i> sp. ....	VR	<i>Anteridocus seminudus</i> Cooper and Grant .....	VR
<i>Stenosisma trabeatum</i> Cooper and Grant .....	VR	LOCALITY N726d : Road Canyon Formation	
<i>Thamnosia capitanensis</i> (Girty) .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	VA
LOCALITY N725s : Bone Spring Formation		<i>Anteridocus seminudus</i> Cooper and Grant .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Bothrostegium derbyoideum</i> Cooper and Grant .....	R
<i>Anemonaria sublaevis</i> (R.E. King) .....	VR	<i>Bothrostegium</i> sp. ....	R
<i>Derbyia</i> sp. ....	VR	<i>Chonetinetes angustisulcatus</i> Cooper and Grant .....	C
<i>Echinauris</i> sp. ....	VR	<i>Cleiothyridina nana</i> Cooper and Grant .....	VR
<i>Enteleles stehlii</i> Cooper and Grant .....	VR	<i>Collemataria batilliformis</i> Cooper and Grant .....	VA
<i>Meekella angustiplicata</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	C
<i>Meekella hessensis</i> R.E. King .....	VR	<i>Compressoproductus acuminatus</i> Cooper and Grant .....	VR
<i>Neophricadothyris</i> sp. ....	VR	<i>Compressoproductus</i> sp. 1 .....	R
LOCALITY N725v : Cibolo Formation, Spicule Zone		<i>Cooperina subcuneata</i> Cooper and Grant .....	C
<i>Acosarina mesoplatys</i> (R.E. King) .....	R	<i>Coscinophora magnifica</i> Cooper and Grant .....	R
<i>Cartorhium</i> sp. ....	VR	<i>Crurithyris</i> sp. ....	R
<i>Choanodus irregularis</i> Cooper and Grant .....	R	<i>Cyclacantharia transitoria</i> Cooper and Grant .....	C
<i>Chonosteges pulcher</i> Cooper and Grant .....	VR	<i>Derbyia cincinnata</i> Cooper and Grant .....	R
<i>Composita</i> sp. ....	VR	<i>Derbyia complicata</i> Cooper and Grant .....	VR
<i>Compressoproductus</i> sp. ....	VR	<i>Derbyia informis</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	R	<i>Derbyia laqueata</i> Cooper and Grant .....	C
<i>Dielasma</i> sp. ....	VR	<i>Derbyia</i> sp. ....	C
<i>Diplanus rarus</i> Cooper and Grant .....	R	<i>Dielasma bellulum</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	R	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR
<i>Enteleles</i> sp. ....	VR	<i>Dielasma</i> sp. ....	VR
<i>Eolyttonia</i> sp. ....	R	<i>Dyoros (Dyoros) angulatus</i> Cooper and Grant .....	R
<i>Hustedia</i> sp. ....	R	<i>Dyoros (Dyoros) transversus</i> Cooper and Grant .....	C
<i>Institella leonardensis</i> (R.E. King) .....	R	<i>Dyoros (Lissosia) parvus</i> Cooper and Grant .....	C
<i>Meekella</i> sp. ....	C	<i>Echinauris bella</i> Cooper and Grant .....	C
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	<i>Echinauris lappacea</i> Cooper and Grant .....	A
<i>Metriolepis carotica</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Neophricadothyris</i> sp. ....	VR	<i>Edriosteges compactus</i> Cooper and Grant .....	R
<i>Rhamnaria</i> sp. ....	VR	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C
<i>Rhipidomella hispidula</i> Cooper and Grant .....	R	<i>Eolyttonia chaotica</i> Cooper and Grant .....	C
<i>Teguliferina</i> sp. ....	R	<i>Eolyttonia parviconica</i> Cooper and Grant .....	R
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR	<i>Heteralosia</i> sp. ....	VR
LOCALITY N725y : Bone Spring Formation		<i>Holotricharina sparsa</i> Cooper and Grant .....	R
<i>Composita costata</i> Cooper and Grant .....	C	<i>Hustedia consuta</i> Cooper and Grant .....	A
		<i>Hustedia</i> sp. ....	R

	Rarity code		Rarity code
LOCALITY N726d - Continued		<i>Cenorhynchia atmata</i> Cooper and Grant.....	VR
<i>Kochiproductus</i> sp. ....	R	<i>Chondronia ovalis</i> Cooper and Grant.....	R
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Composita bucculenta</i> Cooper and Grant.....	C
<i>Leurosina</i> sp. ....	VR	<i>Composita stalagmium</i> Cooper and Grant .....	A
<i>Liosotella costata</i> Cooper and Grant.....	R	<i>Cyclacantharia paucispinosa</i> Cooper and Grant.....	R
<i>Meekella calathica</i> Cooper and Grant.....	VA	<i>Derbyia cincinnata</i> Cooper and Grant .....	VR
<i>Meekella</i> sp. ....	C	<i>Derbyia laqueata</i> Cooper and Grant .....	R
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	C	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR
<i>Metriolepis ziczac</i> Cooper and Grant .....	R	<i>Edriosteges compactus</i> Cooper and Grant .....	R
<i>Neophricadothyris crassibecca</i> Cooper and Grant .....	VR	<i>Hercosestria cribrosa</i> Cooper and Grant .....	R
<i>Neophricadothyris</i> sp. ....	VR	<i>Heterelasma glansfagea</i> Cooper and Grant .....	VR
<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR	<i>Hustedia narinosa</i> Cooper and Grant.....	C
<i>Neospirifer formulosus</i> Cooper and Grant.....	C	<i>Meekella calathica</i> Cooper and Grant.....	C
<i>Paranorella</i> sp. 5 .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant.....	A
<i>Paraspiriferina cellulana</i> Cooper and Grant .....	VR	<i>Pontisia stehlii stehlii</i> Cooper and Grant.....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant .....	C	<i>Reticulariina</i> sp. ....	VR
<i>Peniculauris costata</i> Cooper and Grant.....	VR	<i>Reticulariina venustula</i> Cooper and Grant.....	C
<i>Petasmatherus nitidus</i> Cooper and Grant.....	R	LOCALITY N726h : Skinner Ranch Formation	
<i>Reticulariina pristina</i> Cooper and Grant .....	R	<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	<i>Antronaria dissona</i> Cooper and Grant.....	VR
<i>Rhamnaria vinnula</i> Cooper and Grant.....	A	<i>Antronaria emarginata</i> Cooper and Grant .....	VR
<i>Rhynchopora hebetata</i> Cooper and Grant.....	R	<i>Cenorhynchia</i> sp. 1 .....	VR
<i>Rhytisia rugosa</i> Cooper and Grant.....	C	<i>Composita apheles</i> Cooper and Grant .....	R
<i>Simplicarina incompta</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Spinarella perfecta</i> Cooper and Grant.....	VR	<i>Elliottella varicostata</i> Cooper and Grant.....	VR
<i>Spiriferinaella</i> sp. ....	VR	<i>Enteleles</i> sp. ....	VR
<i>Texarina parallela</i> Cooper and Grant.....	VR	<i>Kozlowskia</i> sp. ....	R
<i>Texarina wordensis</i> (R.E. King) .....	VR	<i>Neophricadothyris catatona</i> Cooper and Grant .....	VR
<i>Thedusia mesocostata</i> Cooper and Grant .....	R	<i>Nudauris enigmatica</i> Cooper and Grant.....	VR
<i>Waagenoconcha convexa</i> Cooper and Grant .....	VR	<i>Peniculauris</i> sp. 1 .....	VR
<i>Xenosteges magnus</i> Cooper and Grant.....	C	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Yakovlevia sulcata</i> Cooper and Grant.....	VR	<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR
LOCALITY N726e : Road Canyon Formation		<i>Tricoria hirpex</i> Cooper and Grant.....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	C	LOCALITY N726j : Skinner Ranch Formation	
<i>Composita</i> sp. ....	C	<i>Antronaria titania</i> Cooper and Grant.....	VR
<i>Cooperina subcuneata</i> Cooper and Grant.....	R	<i>Cartorhium zoyei</i> Cooper and Grant.....	VR
<i>Coscinophora magnifica</i> Cooper and Grant.....	VR	<i>Dielasma hessense</i> Cooper and Grant .....	VR
<i>Crurithyris</i> sp. ....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	R
<i>Cyclacantharia transitoria</i> Cooper and Grant .....	R	<i>Stenoscisma pyraustoides</i> Cooper and Grant.....	VR
<i>Derbyia cincinnata</i> Cooper and Grant .....	R	LOCALITY N726-l : Skinner Ranch Formation	
<i>Derbyia laqueata</i> Cooper and Grant .....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>angulatus</i> Cooper and Grant .....	R	<i>Geyerella hessi</i> Cooper and Grant.....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>transversus</i> Cooper and Grant.....	R	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>solidus</i> Cooper and Grant .....	R	LOCALITY N726n : Hess Formation	
<i>Echinauris lappacea</i> Cooper and Grant.....	C	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	C
<i>Echinauris</i> sp. ....	R	<i>Acosarina</i> sp. ....	C
<i>Edriosteges compactus</i> Cooper and Grant.....	VR	<i>Acritosia peculiaris</i> Cooper and Grant .....	C
<i>Enteleles</i> sp. ....	VR	<i>Composita apheles</i> Cooper and Grant .....	VR
<i>Geyerella inexpectata</i> Cooper and Grant.....	VR	<i>Composita bucculenta</i> Cooper and Grant.....	VA
<i>Goniarina striata</i> Cooper and Grant .....	C	<i>Composita</i> sp. ....	C
<i>Heterelasma</i> sp. ....	VR	<i>Derbyia</i> sp. ....	R
<i>Hustedia</i> sp. ....	VR	<i>Echinauris</i> sp. ....	VR
<i>Meekella</i> sp. ....	VR	<i>Heterelasma</i> sp. 3 .....	VR
<i>Metriolepis</i> sp. ....	VR	<i>Hustedia</i> sp. ....	R
<i>Neospirifer formulosus</i> Cooper and Grant.....	R	<i>Kochiproductus</i> sp. ....	VR
<i>Paraspiriferina pulchra</i> Cooper and Grant .....	VR	<i>Meekella hessensis</i> R.E. King.....	A
<i>Petasmatherus nitidus</i> Cooper and Grant.....	R	<i>Micraphelia</i> sp. ....	VR
<i>Pseudodielasma</i> sp. ....	VR	<i>Neophricadothyris</i> sp. ....	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	R	<i>Peniculauris imitata</i> Cooper and Grant.....	VR
<i>Rhytisia rugosa</i> Cooper and Grant.....	R	<i>Plectelasma kingi</i> Cooper and Grant.....	R
<i>Tropidelasma corniculum</i> Cooper and Grant.....	VR	<i>Pontisia ventricola</i> Cooper and Grant.....	A
<i>Xenosteges trivialis</i> Cooper and Grant.....	R	<i>Reticulariina pusilla</i> Cooper and Grant.....	C
LOCALITY N726f : Road Canyon Formation		<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Acosarina mesoplatys</i> (R.E. King) .....	C		

	Rarity code		Rarity code
LOCALITY N726n - Continued			
<i>Stenosisma hadrum</i> Cooper and Grant	VR	<i>Derbyia pannucia</i> Cooper and Grant	R
LOCALITY N726o : Cathedral Mountain Formation		<i>Derbyia texta</i> Cooper and Grant	VR
<i>Acanthocrania magna</i> Cooper and Grant	VR	<i>Dielasma compactum</i> Cooper and Grant	R
<i>Acanthocrania</i> sp.	VR	<i>Dyoros (Lissosia) concavus</i> Cooper and Grant	C
<i>Acosarina mesoplatys</i> (R.E. King)	VA	<i>Echinauris lateralis</i> Muir-Wood and Cooper	VR
<i>Anemonaria sublaevis</i> (R.E. King)	R	<i>Echinosteges tuberculatus</i> (R.E. King)	R
<i>Choanodus irregularis</i> Cooper and Grant	R	<i>Enteleles wordensis</i> R.E. King	A
<i>Chondronia bella</i> Cooper and Grant	C	<i>Glossothyropsis rectangulata</i> Cooper and Grant	VR
<i>Chonosteges costellatus</i> Cooper and Grant	A	<i>Grandaurispina kingorum</i> Muir-Wood and Cooper	VR
<i>Chonosteges pulcher</i> Cooper and Grant	VR	<i>Heteralosia hystricula</i> (Girty)	R
<i>Chonosteges variabilis</i> Cooper and Grant	VR	<i>Hustedia pugilla nasiterna</i> Cooper and Grant	C
<i>Composita imbricata</i> Cooper and Grant	VR	<i>Leurosina lata</i> Cooper and Grant	VR
<i>Composita</i> sp.	R	<i>Liosotella parva</i> Cooper and Grant	R
<i>Derbyia cincinnata</i> Cooper and Grant	C	<i>Liosotella wordensis</i> (R.E. King)	R
<i>Derbyia complicata</i> Cooper and Grant	VR	<i>Meekella skenoides</i> Girty	C
<i>Derbyia informis</i> Cooper and Grant	VR	<i>Megousia mucronata</i> Cooper and Grant	C
<i>Derbyia laqueata</i> Cooper and Grant	C	<i>Metriolepis pulvinata</i> Cooper and Grant	VR
<i>Derbyia</i> sp.	R	<i>Neophricadothyris conara</i> Cooper and Grant	R
<i>Dielasma anterolatum</i> Cooper and Grant	VR	<i>Neospirifer amphigyus</i> Cooper and Grant	C
<i>Dielasma ellipsoideum</i> Cooper and Grant	VR	<i>Paraspiriferina laqueata</i> Cooper and Grant	R
<i>Dielasma</i> sp.	VR	<i>Paucispinifera quadrata</i> Cooper and Grant	R
<i>Echinauris irregularis</i> Cooper and Grant	C	<i>Petasmatherus opulus</i> Cooper and Grant	VR
<i>Echinauris</i> sp.	C	<i>Reticulariina senticosa</i> Cooper and Grant	VR
<i>Echinauris venustula</i> Cooper and Grant	A	<i>Rhamnaria kingorum delicata</i> Muir-Wood and Cooper	C
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper	C	<i>Rhynchopora palumbula</i> Cooper and Grant	VR
<i>Eolyttonia chaotica</i> Cooper and Grant	R	<i>Spiriferellina hilli</i> (Girty)	R
<i>Hercosia delicata</i> Cooper and Grant	VA	<i>Spiriferinaella limata</i> Cooper and Grant	VR
<i>Hercosia uddeni</i> (Böse)	A	<i>Stenosisma renode</i> Cooper and Grant	VR
<i>Heterelasma glansfagea</i> Cooper and Grant	R	<i>Thedusia procera</i> Cooper and Grant	R
<i>Holotricharina hirsuta</i> Cooper and Grant	VR	<i>Tropidelasma anthicum</i> Cooper and Grant	R
<i>Hustedia consuta</i> Cooper and Grant	VA	<i>Waagenoconcha magnifica</i> Cooper and Grant	VR
<i>Hustedia</i> sp.	A	LOCALITY N726s : Word Formation, China Tank	
<i>Kochiproductus</i> sp. 6	VR	Member	
<i>Lepidospirifer demissus</i> Cooper and Grant	VR	<i>Composita enormis</i> Cooper and Grant	R
<i>Lepidospirifer inferus</i> Cooper and Grant	VR	<i>Cruirithyris tholiaphor</i> Cooper and Grant	VR
<i>Meekella calathica</i> Cooper and Grant	VA	<i>Dielasma</i> sp.	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper	R	<i>Dyoros (Lissosia) concavus</i> Cooper and Grant	VR
<i>Metriolepis</i> sp.	VR	<i>Enteleles wordensis</i> R.E. King	VR
<i>Neophricadothyris bullata</i> Cooper and Grant	C	<i>Hustedia pugilla nasiterna</i> Cooper and Grant	VR
<i>Neospirifer mansuetus</i> Cooper and Grant	R	<i>Meekella skenoides</i> Girty	VR
<i>Nudauris linospina</i> Cooper and Grant	VR	<i>Megousia mucronata</i> Cooper and Grant	R
<i>Peniculauris subcostata</i> (R.E. King)	VR	<i>Metriolepis pulvinata</i> Cooper and Grant	VR
<i>Pontisia stehlii stehlii</i> Cooper and Grant	C	<i>Neospirifer amphigyus</i> Cooper and Grant	R
<i>Pontisia stehlii tumidosa</i> Cooper and Grant	R	<i>Paucispinifera auriculata</i> Muir-Wood and Cooper	VR
<i>Reticulariina craticula</i> Cooper and Grant	A	<i>Rhynchopora palumbula</i> Cooper and Grant	VR
<i>Reticulariina</i> sp.	VR	<i>Spiriferella embrithes</i> Cooper and Grant	VR
<i>Rhamnaria tenuispinosa</i> Cooper and Grant	C	<i>Spiriferellina hilli</i> (Girty)	VR
<i>Rhynchopora hebetata</i> Cooper and Grant	VR	<i>Stenosisma renode</i> Cooper and Grant	VR
<i>Rugatia paraindica</i> (McKee)	VR	LOCALITY N726t : Word Formation, Appel Ranch	
<i>Stenosisma</i> sp.	VR	Member	
<i>Texarina wordensis</i> (R.E. King)	C	<i>Cartorhium orbiculatum</i> Cooper and Grant	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper	R	<i>Cartorhium retusum</i> Cooper and Grant	VR
LOCALITY N726r : Word Formation, China Tank		<i>Composita enormis</i> Cooper and Grant	R
Member		<i>Cyclacantharia kingorum</i> Cooper and Grant	C
<i>Allorhynchus permianum wordense</i> Cooper and Grant	R	<i>Derbyia filosa</i> Cooper and Grant	C
<i>Bothrionia nasuta</i> Cooper and Grant	VR	<i>Dielasma zebratum</i> Cooper and Grant	C
<i>Cactosteges anomalus</i> Cooper and Grant	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper	VR
<i>Collemataria elongata</i> Cooper and Grant	C	<i>Echinosteges tuberculatus</i> (R.E. King)	R
<i>Composita parasulcata</i> Cooper and Grant	C	<i>Eolyttonia</i> sp.	R
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud	VR	<i>Grandaurispina crassa</i> Cooper and Grant	R
<i>Costispinifera rugatula</i> (Girty)	R	<i>Heteralosia hystricula</i> (Girty)	C
<i>Cruirithyris tholiaphor</i> Cooper and Grant	R	<i>Hustedia pugilla hebetata</i> Cooper and Grant	C
<i>Cyclacantharia kingorum</i> Cooper and Grant	C	<i>Liosotella wordensis</i> (R.E. King)	C
		<i>Meekella skenoides</i> Girty	R

	Rarity code		Rarity code
LOCALITY N726t - Continued		<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Neophricadothyris conara</i> Cooper and Grant .....	R	<i>Choanodus irregularis</i> Cooper and Grant .....	VR
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	A	<i>Chonosteges variabilis</i> Cooper and Grant .....	VR
<i>Petasmatherus opulus</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	R
<i>Reticulariina cerina</i> Cooper and Grant .....	C	<i>Derbyia cincinnata</i> Cooper and Grant .....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	VR	<i>Derbyia laqueata</i> Cooper and Grant .....	R
<i>Spiriferella propria</i> Cooper and Grant .....	VR	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	R
<i>Xenosteges quadratus</i> Cooper and Grant .....	R	<i>Echinauris</i> sp. ....	VR
LOCALITY N726u : Cathedral Mountain Formation		<i>Goniarina</i> sp. 7 .....	R
<i>Acanthocrania</i> sp. ....	VR	<i>Hercosia uddeni</i> (Böse) .....	R
<i>Acosarina mesoplatys</i> (R.E. King) .....	A	<i>Hustedia ampullacea</i> Cooper and Grant .....	R
<i>Choanodus irregularis</i> Cooper and Grant .....	C	<i>Hustedia spicata</i> Cooper and Grant .....	C
<i>Choanodus perfectus</i> Cooper and Grant .....	VR	<i>Institella leonardensis</i> (R.E. King) .....	R
<i>Chonosteges costellatus</i> Cooper and Grant .....	VR	<i>Kochiproductus</i> sp. ....	VR
<i>Chonosteges pulcher</i> Cooper and Grant .....	C	<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	C	<i>Loxophragmus ellipticus</i> Cooper and Grant .....	R
<i>Collemataria gregaria</i> Cooper and Grant .....	VA	<i>Martinia miranda</i> Cooper and Grant .....	C
<i>Composita imbricata</i> Cooper and Grant .....	C	<i>Meekella calathica</i> Cooper and Grant .....	A
<i>Composita</i> sp. ....	R	<i>Meekella</i> sp. ....	R
<i>Compressoproductus flabellatus</i> Cooper and Grant .....	R	<i>Metriolepis tegulata</i> Cooper and Grant .....	R
<i>Derbyia cincinnata</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	R
<i>Derbyia complicata</i> Cooper and Grant .....	VR	<i>Neospirifer mansuetus</i> Cooper and Grant .....	C
<i>Derbyia informis</i> Cooper and Grant .....	C	<i>Niviconia globosa</i> (R.E. King) .....	C
<i>Derbyia laqueata</i> Cooper and Grant .....	C	<i>Petasmaia expansa</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	VR	<i>Rhamnaria vinnula</i> Cooper and Grant .....	VR
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	A	<i>Rhipidomella hispidula</i> Cooper and Grant .....	R
<i>Dyoros (Tetragonetes) giganteus</i> Cooper and Grant .....	VR	<i>Tautosia fastigiata</i> Cooper and Grant .....	VR
<i>Echinauris circularis</i> Cooper and Grant .....	VR	<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	C
<i>Echinauris irregularis</i> Cooper and Grant .....	A	LOCALITY N726y : Cathedral Mountain Formation	
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C	<i>Acosarina mesoplatys</i> (R.E. King) .....	VR
<i>Eolyttonia circularis</i> Cooper and Grant .....	C	<i>Anemonaria sublaevis</i> (R.E. King) .....	R
<i>Hercosia uddeni</i> (Böse) .....	A	<i>Chonosteges variabilis</i> Cooper and Grant .....	R
<i>Heterelasma</i> sp. ....	VR	<i>Collemataria gregaria</i> Cooper and Grant .....	R
<i>Hustedia lusca</i> Cooper and Grant .....	A	<i>Composita imbricata</i> Cooper and Grant .....	R
<i>Hustedia spicata</i> Cooper and Grant .....	VR	<i>Compressoproductus curtus</i> Cooper and Grant .....	VR
<i>Lepidospirifer demissus</i> Cooper and Grant .....	C	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	VA	<i>Dyoros (Tetragonetes) planus</i> Cooper and Grant .....	VR
<i>Meekella</i> sp. ....	C	<i>Echinauris irregularis</i> Cooper and Grant .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	R	<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR
<i>Megousia umbonata</i> Cooper and Grant .....	VR	<i>Eolyttonia circularis</i> Cooper and Grant .....	VR
<i>Metriolepis tegulata</i> Cooper and Grant .....	R	<i>Hercosia uddeni</i> (Böse) .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR	<i>Kochiproductus</i> sp. 6 .....	VR
<i>Neophricadothyris</i> sp. ....	R	<i>Lepidospirifer angulatus</i> Cooper and Grant .....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	C	<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR
<i>Nudauris linospina</i> Cooper and Grant .....	VR	<i>Meekella calathica</i> Cooper and Grant .....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Meekella occidentalis</i> (Newberry) .....	VR
<i>Petasmaia expansa</i> Cooper and Grant .....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR	<i>Megousia umbonata</i> Cooper and Grant .....	VR
<i>Pontisia stehlii tumidosa</i> Cooper and Grant .....	R	<i>Neospirifer mansuetus</i> Cooper and Grant .....	R
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	C	<i>Nudauris linospina</i> Cooper and Grant .....	C
<i>Rugatia paraindica</i> (McKee) .....	VR	<i>Peniculauris subcostata</i> (R.E. King) .....	R
<i>Stenosisma</i> sp. ....	R	<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR
<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR	<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	R
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	A	<i>Rugatia occidentalis parvauris</i> (Newberry) .....	C
LOCALITY N726v : Cathedral Mountain Formation		<i>Rugatia paraindica</i> (McKee) .....	VR
<i>Anemonaria sublaevis</i> (R.E. King) .....	R	<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR
<i>Megousia umbonata</i> Cooper and Grant .....	R	<i>Thamnosia anterospinosa</i> Cooper and Grant .....	VR
LOCALITY N726w : Cathedral Mountain Formation		LOCALITY N726z : Road Canyon Formation	
<i>Megousia umbonata</i> Cooper and Grant .....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	C
<i>Nudauris linospina</i> Cooper and Grant .....	R	<i>Cenorhynchia saginata</i> Cooper and Grant .....	R
LOCALITY N726x : Cathedral Mountain Formation		<i>Chondronia ovalis</i> Cooper and Grant .....	VR
<i>Acanthocrania</i> sp. ....	VR	<i>Composita quantilla</i> Cooper and Grant .....	C
		<i>Composita stalagmium</i> Cooper and Grant .....	VA

	Rarity code		Rarity code
LOCALITY N726z - Continued			
<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	R	<i>Meekella hessensis</i> R.E. King .....	C
<i>Derbyia cincinnata</i> Cooper and Grant .....	R	<i>Metriolepis</i> sp. ....	VR
<i>Derbyia laqueata</i> Cooper and Grant .....	R	<i>Neophricadothyris</i> sp. ....	VR
<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR	<i>Peniculauris</i> sp. 1 .....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	R	<i>Petrocrania</i> sp. ....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	C	<i>Reticulariina impressa</i> Cooper and Grant .....	VR
<i>Eolyttonia chaotica</i> Cooper and Grant .....	VR	<i>Rhamnaria grandis</i> Cooper and Grant .....	VR
<i>Hercosestria cribrosa</i> Cooper and Grant .....	C	<i>Rhipidomella hessensis</i> R.E. King .....	R
<i>Holotricharina hirsuta</i> Cooper and Grant .....	VR	<i>Sceletonia crassa</i> Cooper and Grant .....	VR
<i>Hustedia cuneata</i> Cooper and Grant .....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	C
<i>Hustedia narinosa</i> Cooper and Grant .....	VA	<i>Tropidelasma</i> sp. 3? .....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	A	LOCALITY N727b : Skinner Ranch Formation	
<i>Meekella calathica</i> Cooper and Grant .....	A	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	R	LOCALITY N727d : Neal Ranch Formation	
<i>Metriolepis</i> sp. ....	VR	<i>Cenorhynchia hebata</i> Cooper and Grant .....	VR
<i>Neophricadothyris bullata</i> Cooper and Grant .....	R	<i>Composita strongyle</i> Cooper and Grant .....	R
<i>Neospirifer bakeri bakeri</i> R.E. King .....	R	<i>Crurithyris tumibilis</i> Cooper and Grant .....	VR
<i>Paucispinifera sulcata</i> Cooper and Grant .....	VR	<i>Derbyia carteri</i> Cooper and Grant .....	R
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Diplanus catatonus</i> Cooper and Grant .....	VR
<i>Pontisia</i> sp. ....	VR	<i>Enteleles wolfcampensis</i> R.E. King .....	R
<i>Reticulariina craticula</i> Cooper and Grant .....	C	<i>Geyerella kingorum</i> Cooper and Grant .....	R
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	VR	<i>Isogramma vidriense</i> Cooper and Grant .....	VR
<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR	<i>Meekella prionota</i> Cooper and Grant .....	R
<i>Stenoscisma calvatum</i> Cooper and Grant .....	VR	<i>Orthotetella wolfcampensis</i> R.E. King .....	VR
<i>Stenoscisma camurum</i> Cooper and Grant .....	VR	<i>Parenteleles cooperi</i> R.E. King .....	VR
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	VR	<i>Rhipidomella miscella</i> Cooper and Grant .....	VR
LOCALITY N726za : Road Canyon Formation		<i>Teguliferina boesei</i> R.E. King .....	C
<i>Acosarina mesoplatys</i> (R.E. King) .....	VR	<i>Tropidelasma culmenatum</i> Cooper and Grant .....	R
<i>Cenorhynchia saginata</i> Cooper and Grant .....	VR	LOCALITY N727e : Neal Ranch Formation	
<i>Composita quantilla</i> Cooper and Grant .....	R	<i>Acanthocrania</i> sp. ....	VR
<i>Composita stalagmium</i> Cooper and Grant .....	C	<i>Atelestegastus marginatus</i> Cooper and Grant .....	VR
<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	VR	<i>Beecheria elliptica</i> Cooper and Grant .....	R
<i>Derbyia cincinnata</i> Cooper and Grant .....	VR	<i>Camarelasma neali</i> Cooper and Grant .....	R
<i>Dielasma ellipsoideum</i> Cooper and Grant .....	R	<i>Cancrinella</i> sp. ....	VR
<i>Hercosestria cribrosa</i> Cooper and Grant .....	VR	<i>Cenorhynchia camerata</i> Cooper and Grant .....	C
<i>Hustedia connorsi</i> Cooper and Grant .....	C	<i>Cenorhynchia hebata</i> Cooper and Grant .....	C
<i>Hustedia narinosa</i> Cooper and Grant .....	R	<i>Chelononia neali</i> Cooper and Grant .....	C
<i>Meekella calathica</i> Cooper and Grant .....	VR	<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	R
<i>Neophricadothyris bullata</i> Cooper and Grant .....	R	<i>Composita</i> sp. ....	C
<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR	<i>Composita strongyle</i> Cooper and Grant .....	C
<i>Paucispinifera sulcata</i> Cooper and Grant .....	C	<i>Crurithyris tumibilis</i> Cooper and Grant .....	C
<i>Reticulariina craticula</i> Cooper and Grant .....	C	<i>Derbyia bella</i> Cooper and Grant .....	VA
<i>Rhynchopora hebetata</i> Cooper and Grant .....	C	<i>Derbyia carteri</i> Cooper and Grant .....	R
<i>Stenoscisma triquetrum</i> Cooper and Grant .....	R	<i>Derbyia</i> sp. ....	R
LOCALITY N727a : Skinner Ranch Formation, Sullivan		<i>Dielasma pygmaeum</i> Cooper and Grant .....	C
Peak Member		<i>Dielasma</i> sp. ....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Diplanus catatonus</i> Cooper and Grant .....	VR
<i>Acritosia peculiaris</i> Cooper and Grant .....	R	<i>Enteleles wolfcampensis</i> R.E. King .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	R	<i>Eolyttonia fredericksi</i> (R.E. King) .....	VR
<i>Composita apheles</i> Cooper and Grant .....	R	<i>Fimbrinia</i> sp. 2 .....	R
<i>Compressoproductus parvus</i> Cooper and Grant .....	VR	<i>Geyerella kingorum</i> Cooper and Grant .....	VR
<i>Derbyia crenulata</i> Girty .....	VR	<i>Goniarrina</i> sp. 6 .....	R
<i>Diplanus lamellatus</i> (R.E. King) .....	R	<i>Hustedia trita trita</i> Cooper and Grant .....	C
<i>Echinauris irregularis</i> Cooper and Grant .....	VR	<i>Hystericulina</i> sp. ....	VR
<i>Eolyttonia</i> sp. ....	R	<i>Hystericulina sulcata</i> Cooper and Grant .....	R
<i>Glyptosteges angustus</i> (R.E. King) .....	R	<i>Isogramma concavum</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	<i>Kochiproductus</i> sp. ....	VR
<i>Goniarrina</i> sp. 6 .....	VR	<i>Lepidocrania sparsispinosa</i> Cooper and Grant .....	VR
<i>Hustedia hessensis</i> R.E. King .....	R	<i>Limbella wolfcampensis</i> (R.E. King) .....	R
<i>Kochiproductus</i> sp. 5 .....	VR	<i>Linoproductus</i> sp. ....	VR
<i>Lepidospirifer</i> sp. ....	VR	<i>Martinia exigua</i> Cooper and Grant .....	R
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Martinia nealranchensis</i> Cooper and Grant .....	R
		<i>Martinia</i> sp. ....	R



	Rarity code		Rarity code
LOCALITY N727e - Continued		<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	C
<i>Meekella prionota</i> Cooper and Grant .....	A	<i>Leiorhynchoidea scelestia</i> Cooper and Grant .....	VR
<i>Neochonetes liratus</i> Cooper and Grant .....	VR	<i>Leurosina marginata</i> Cooper and Grant .....	A
<i>Neochonetes</i> sp. ....	VR	<i>Liosotella irregularis</i> Cooper and Grant.....	A
<i>Neophricadothyris transversa</i> Cooper and Grant.....	R	<i>Meekella skenoides</i> Girty .....	C
<i>Neospirifer apothescelus</i> Cooper and Grant .....	R	<i>Megousia definita</i> Cooper and Grant .....	R
<i>Neospirifer placidus</i> Cooper and Grant .....	C	<i>Metriolepis pulvinata</i> Cooper and Grant .....	VR
<i>Nudauris tribulosa</i> Cooper and Grant .....	R	<i>Metriolepis</i> sp. ....	VR
<i>Orthotetella wolfcampensis</i> R.E. King .....	VR	<i>Neophricadothyris</i> sp. ....	VR
<i>Orthotichia koziowskii</i> R.E. King.....	A	<i>Paraspiriferina rotundata</i> Cooper and Grant.....	C
<i>Parenteletes cooperi</i> R.E. King.....	C	<i>Paucispinifera</i> sp. ....	R
<i>Pontisia kingi</i> Cooper and Grant.....	C	<i>Phrenophoria subcarinata</i> Cooper and Grant.....	R
<i>Pontisia parva</i> Cooper and Grant.....	R	<i>Pseudodielasma globulum</i> Cooper and Grant.....	C
<i>Pontisia wolfcampensis</i> Cooper and Grant .....	R	<i>Pseudodielasma ovatum</i> Cooper and Grant.....	C
<i>Pseudoleptodus conicus</i> Cooper and Grant.....	C	<i>Pseudoleptodus grandis</i> Cooper and Grant.....	VR
<i>Reticulariina</i> sp. ....	R	<i>Reticulariina cerina</i> Cooper and Grant .....	C
<i>Reticulariina strigosa</i> Cooper and Grant.....	R	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C
<i>Rhipidomella miscella</i> Cooper and Grant.....	C	<i>Rhynchopora palumbula</i> Cooper and Grant.....	R
<i>Spiriferellina nasuta</i> Cooper and Grant.....	R	<i>Spiriferella clypeata</i> Cooper and Grant.....	C
<i>Stenoscisma bellatulum</i> Cooper and Grant .....	R	<i>Spiriferellina hilli</i> (Girty).....	VR
<i>Striatifera linoproductiformis</i> Cooper and Grant.....	VR	<i>Spiriferinaella scalpata</i> Cooper and Grant.....	VR
<i>Teguliferina boesei</i> R.E. King .....	C	<i>Stenoscisma</i> sp. ....	VR
<i>Tropidelasma culmenatum</i> Cooper and Grant.....	VR	<i>Tautosia distorta</i> Cooper and Grant.....	VR
LOCALITY N727f : Skinner Ranch Formation		<i>Texarina elongata</i> Cooper and Grant.....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Texarina</i> sp. ....	VR
<i>Acritosia solida</i> Cooper and Grant .....	R	<i>Thamnusia phragmophora</i> Cooper and Grant .....	VR
<i>Choanodus irregularis</i> Cooper and Grant.....	VR	<i>Thedusia procera</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	R	<i>Tropidelasma anthicum</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	R	<i>Waagenoconcha magnifica</i> Cooper and Grant.....	R
<i>Echinauris</i> sp. ....	R	<i>Wellerella girtyi girtyi</i> Cooper and Grant.....	C
<i>Enteletes subcircularis</i> Cooper and Grant .....	VR	<i>Xenosteges quadratus</i> Cooper and Grant .....	R
<i>Hustedia</i> sp. ....	VR	<i>Yakovlevia indentata</i> Cooper and Grant .....	C
<i>Limbella limbata</i> Cooper and Grant .....	VR	LOCALITY N727m : Skinner Ranch Formation	
<i>Meekella hessensis</i> R.E. King.....	C	<i>Chonosteges variabilis</i> Cooper and Grant.....	VR
<i>Neospirifer</i> sp. ....	VR	<i>Glyptosteges intricatus</i> Cooper and Grant.....	R
<i>Rhipidomella hessensis</i> R.E. King.....	C	<i>Stenoscisma hadrum</i> Cooper and Grant.....	VR
<i>Spyridiophora reticulata</i> (R.E. King).....	VR	LOCALITY N727n : Skinner Ranch Formation	
LOCALITY N727h : Skinner Ranch Formation		<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR
<i>Cartorhium zoyei</i> Cooper and Grant.....	VR	LOCALITY N727o : Cathedral Mountain Formation	
LOCALITY N727i : Lenox Hills Formation		<i>Agelesia triangularis</i> (R.E. King) .....	R
<i>Reticulatia</i> sp. ....	VR	<i>Composita</i> sp. ....	VR
LOCALITY N727j : Word Formation, Appel Ranch Member		<i>Compressoproductus curtus</i> Cooper and Grant .....	VR
<i>Bothrionia transversa</i> Cooper and Grant .....	C	<i>Enteletes leonardensis</i> R.E. King .....	VR
<i>Cartorhium orbiculatum</i> Cooper and Grant.....	R	<i>Hustedia</i> sp. ....	VR
<i>Cenorhynchia fracidia</i> Cooper and Grant.....	VR	<i>Neospirifer mansuetus</i> Cooper and Grant .....	VR
<i>Composita enormis</i> Cooper and Grant .....	VR	<i>Stenoscisma triquetrum</i> Cooper and Grant .....	VR
<i>Composita parasulcata</i> Cooper and Grant.....	C	LOCALITY N727p : Cathedral Mountain Formation, Wedin Member	
<i>Cooperina</i> sp. ....	VR	<i>Agelesia triangularis</i> (R.E. King) .....	C
<i>Crurithyris tholiaphor</i> Cooper and Grant.....	VR	<i>Cartorhium coristum</i> Cooper and Grant .....	R
<i>Ctenalosia fixata</i> Cooper and Stehli.....	A	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	C	<i>Choanodus perfectus</i> Cooper and Grant.....	R
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Chonosteges pulcher</i> Cooper and Grant .....	R
<i>Derbyia texta</i> Cooper and Grant.....	C	<i>Compressoproductus thomasi</i> Cooper and Grant.....	VR
<i>Dielasma</i> sp. ....	VR	<i>Derbyia complicata</i> Cooper and Grant.....	R
<i>Dielasma zebratum</i> Cooper and Grant.....	R	<i>Dielasma ellipsoideum</i> Cooper and Grant .....	VR
<i>Divaricosta vagabunda</i> Cooper and Grant .....	R	<i>Diplanus lamellatus</i> (R.E. King) .....	R
<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	A	<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant.....	VR
<i>Dyoros (Tetragonetes) quadrangulatus</i> Cooper and Grant..	A	<i>Echinauris irregularis</i> Cooper and Grant .....	R
<i>Eolytonia progressa</i> Cooper and Grant .....	C	<i>Enteletes plummeri</i> R.E. King .....	A
<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	R	<i>Hercosia uddeni</i> (Böse) .....	VR
<i>Grandaurispina crassa</i> Cooper and Grant .....	C	<i>Heterelasma angulatum</i> Cooper and Grant.....	VR
<i>Heteralosia hystricula</i> (Girty).....	VR	<i>Hustedia lusca</i> Cooper and Grant .....	R



	Rarity code		Rarity code
LOCALITY N727p - Continued		<i>Cartorhium retusum</i> Cooper and Grant .....	C
<i>Institella leonardensis</i> (R.E. King) .....	A	<i>Cartorhium</i> sp. ....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant .....	VR	<i>Composita enormis</i> Cooper and Grant .....	R
<i>Meekella calathica</i> Cooper and Grant .....	C	<i>Composita parasulcata</i> Cooper and Grant .....	C
<i>Metriolepis larina</i> Cooper and Grant .....	C	<i>Composita prospera</i> Cooper and Grant .....	A
<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	A	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR
<i>Stenosisma exutum</i> Cooper and Grant .....	VR	<i>Crurithyris tholiaphor</i> Cooper and Grant .....	C
<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR	<i>Ctenalosia fixata</i> Cooper and Stehli .....	A
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	VR	<i>Ctenalosia</i> sp. ....	R
LOCALITY N727q : Cathedral Mountain Formation		<i>Cyclacantharia robusta</i> Cooper and Grant .....	C
<i>Cartorhium coristum</i> Cooper and Grant .....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	C
<i>Cenorhynchia mitigata</i> Cooper and Grant .....	VR	<i>Derbyia pannucia</i> Cooper and Grant .....	VR
<i>Chonosteges pulcher</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Compressoproductus thomasi</i> Cooper and Grant .....	VR	<i>Derbyia texta</i> Cooper and Grant .....	C
<i>Entelestes plummeri</i> R.E. King .....	VR	<i>Dielasma compactum</i> Cooper and Grant .....	VR
<i>Entelestes</i> sp. ....	VR	<i>Dielasma ligonorum</i> Cooper and Grant .....	R
<i>Hercosia uddeni</i> (Böse) .....	VR	<i>Dielasma pictile</i> Cooper and Grant .....	C
<i>Institella leonardensis</i> (R.E. King) .....	R	<i>Dielasma subcylindricum</i> Cooper and Grant .....	VR
<i>Nudauris linospina</i> Cooper and Grant .....	VR	<i>Divaricosta squarrosa</i> Cooper and Grant .....	R
<i>Rhipidomella hispidula</i> Cooper and Grant .....	VR	<i>Dyoros (Dyoros) convexus</i> Cooper and Grant .....	VA
LOCALITY N727t : Skinner Ranch Formation, Decie Ranch Member		<i>Dyoros (Tetragonetes) auriculatus</i> Cooper and Grant .....	C
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Dyoros (Tetragonetes) subquadratus</i> Cooper and Grant .....	C
LOCALITY N727u : Skinner Ranch Formation, Decie Ranch Member		<i>Echinauris productelloides</i> Cooper and Grant .....	C
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR
<i>Antronaria emarginata</i> Cooper and Grant .....	C	<i>Eolyttonia progressa</i> Cooper and Grant .....	C
<i>Antronaria titania</i> Cooper and Grant .....	C	<i>Grandaurispina belliformis</i> Cooper and Grant .....	VR
<i>Cartorhium zoyei</i> Cooper and Grant .....	R	<i>Grandaurispina rudis</i> Cooper and Grant .....	C
<i>Chonosteges matutinus</i> Cooper and Grant .....	VR	<i>Grandaurispina</i> sp. ....	VR
<i>Composita apheles</i> Cooper and Grant .....	C	<i>Heteralosia hystricula</i> (Girty) .....	VR
<i>Entelestes rotundobesus</i> Cooper and Grant .....	VR	<i>Heteralosia magnispina</i> Cooper and Grant .....	C
<i>Geyerella hessi</i> Cooper and Grant .....	VR	<i>Heteralosia</i> sp. ....	VR
<i>Hustedia</i> sp. ....	VR	<i>Heterelasma concavum</i> Cooper and Grant .....	R
<i>Meekella hessensis</i> R.E. King .....	VR	<i>Heterelasma</i> sp. ....	VR
<i>Orthotichia newelli</i> Cooper and Grant .....	VR	<i>Holosia ovoidea</i> Cooper and Grant .....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	R	<i>Hustedia citeria</i> Cooper and Grant .....	VA
<i>Spyridiophora reticulata</i> (R.E. King) .....	C	<i>Hustedia hapala</i> Cooper and Grant .....	C
<i>Stenosisma problematicum</i> Cooper and Grant .....	C	<i>Hustedia tomea</i> Cooper and Grant .....	C
LOCALITY N727w : Cathedral Mountain Formation		<i>Isogramma</i> sp. ....	VR
<i>Agelesia triangularis</i> (R.E. King) .....	R	<i>Leiorhynchoidea rotundidorsa</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	VR	<i>Leiorhynchoidea scelestia</i> Cooper and Grant .....	R
<i>Crurithyris</i> sp. ....	VR	<i>Lepidocrania</i> sp. ....	VR
<i>Entelestes</i> sp. ....	VR	<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	R
<i>Eolyttonia</i> sp. ....	VR	<i>Leurosina delicata</i> Cooper and Grant .....	R
<i>Hustedia</i> sp. ....	R	<i>Liosotella spinumbona</i> Cooper and Grant .....	A
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Liosotella wordensis</i> (R.E. King) .....	C
<i>Rhipidomella hispidula</i> Cooper and Grant .....	R	<i>Martinia causaria</i> Cooper and Grant .....	VR
LOCALITY N727x : Cathedral Mountain Formation		<i>Meekella skenoides</i> Girty .....	VA
<i>Agelesia triangularis</i> (R.E. King) .....	VR	<i>Metriolepis exserta</i> Cooper and Grant .....	C
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Neophricadothyris conara</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	VR	<i>Notothyris</i> sp. ....	VR
<i>Institella leonardensis</i> (R.E. King) .....	R	<i>Paraspiriferina paginata</i> Cooper and Grant .....	R
<i>Meekella calathica</i> Cooper and Grant .....	VR	<i>Paraspiriferina</i> sp. ....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Paucispinifera tumida</i> Cooper and Grant .....	C
<i>Stenosisma</i> sp. ....	VR	<i>Petasmatherus opulus</i> Cooper and Grant .....	VR
LOCALITY N728 : Cherry Canyon Formation, Getaway Member		<i>Phrenophoria pinguiformis</i> Cooper and Grant .....	C
<i>Allorhynchus permianum permianum</i> Stehli .....	C	<i>Polymorpharia polymorpha</i> Cooper and Grant .....	C
<i>Bothrionia guadalupensis</i> Cooper and Grant .....	R	<i>Pseudodielasma magnum</i> Cooper and Grant .....	R
		<i>Pseudodielasma</i> sp. ....	VR
		<i>Pseudoleptodus getawayensis</i> Stehli .....	C
		<i>Rallacosta</i> sp. 1 .....	VR
		<i>Reticulariina roscida</i> Cooper and Grant .....	C
		<i>Reticulariina</i> sp. ....	VR
		<i>Rhamnaria sulcata</i> Cooper and Grant .....	C
		<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY N728 - Continued		<i>Fimbrinia ovata</i> Cooper and Grant.....	VR
<i>Spiriferella gloverae</i> Cooper and Grant.....	C	<i>Glossothyropsis</i> sp. 1 (Girty).....	VR
<i>Spiriferinaella medialis</i> Cooper and Grant.....	VR	<i>Goniarrina diabloensis</i> Cooper and Grant.....	VR
<i>Stenoscisma aberrans</i> Cooper and Grant.....	VR	<i>Goniarrina permiana</i> (Stehli).....	VR
<i>Stenoscisma renode</i> Cooper and Grant.....	R	<i>Goniarrina</i> sp. ....	VR
<i>Stenoscisma</i> sp. ....	VR	<i>Gypospirifer infraplicus</i> (R.E. King).....	VR
<i>Strophalosia inexpectans</i> Cooper and Grant.....	VR	<i>Heterelasma quadratum</i> Cooper and Grant.....	VR
<i>Tautosia transenna</i> Cooper and Grant.....	C	<i>Hustedia hessensis</i> R.E. King.....	A
<i>Texarina solita</i> Cooper and Grant.....	VR	<i>Hustedia</i> sp. ....	R
<i>Thedusia dischides</i> Cooper and Grant.....	A	<i>Isogramma</i> sp. ....	VR
<i>Tropidelasma furcillatum</i> Cooper and Grant.....	VR	<i>Kozlowskia kingi</i> Stehli.....	VA
<i>Tropidelasma</i> sp. ....	VR	<i>Leiorhynchoidea</i> sp. ....	VR
<i>Waagenoconcha magnifica</i> Cooper and Grant.....	R	<i>Lepidocrania</i> sp. ....	VR
<i>Wellerella girtyi seorsa</i> Cooper and Grant.....	A	<i>Leurosina sinesulca</i> (Stehli).....	A
<i>Xenosteges anomalus</i> Cooper and Grant.....	C	<i>Leurosina vulgarica</i> Cooper and Grant.....	C
<i>Xenosteges quadratus</i> Cooper and Grant.....	C	<i>Limbella victorioensis</i> Stehli.....	VR
<i>Yakovlevia costellata</i> Cooper and Grant.....	R	<i>Linoproductus angustus</i> R.E. King.....	C
LOCALITY N728d : Hueco Formation		<i>Liraria lirata</i> Cooper and Grant.....	C
<i>Acosarina</i> sp. ....	R	<i>Meekella attenuata</i> Girty.....	VA
<i>Cancrinella</i> sp. ....	VR	<i>Meekella hessensis</i> R.E. King.....	VR
<i>Crurithyris</i> sp. ....	VR	<i>Meekella intermedia</i> Cooper and Grant.....	VR
<i>Ctenalosia</i> sp. ....	VR	<i>Micraphelia</i> sp. ....	C
<i>Dasysaria undulata</i> Cooper and Grant.....	R	<i>Nudauris diabloensis</i> Stehli.....	C
<i>Derbyia</i> sp. ....	R	<i>Orthotetella wolfcampensis</i> R.E. King.....	VR
<i>Kochiproductus</i> sp. ....	VR	<i>Orthotichia irregularis</i> Cooper and Grant.....	VA
<i>Kutorginella</i> sp. ....	VR	<i>Paranorella</i> sp. b.....	VR
<i>Leurosina serratoseptata</i> Cooper and Grant.....	C	<i>Petrocrania diabloensis</i> Cooper and Grant.....	VR
<i>Meekella</i> sp. ....	VR	<i>Pontisia nanas</i> (Stehli).....	R
<i>Nudauris reticulata</i> Cooper and Grant.....	VR	<i>Quadrochonetes girtyi</i> Stehli.....	C
<i>Spuriosa</i> sp. ....	VR	<i>Ramavectus diabloensis</i> Stehli.....	C
LOCALITY N728e : Bone Spring Formation		<i>Reticulariina newelli</i> (Stehli).....	R
<i>Acosarina dorsisulcata</i> Cooper and Grant.....	A	<i>Reticulariina</i> sp. ....	VR
<i>Acritosia teguliferoides</i> (R.E. King).....	VA	<i>Reticulariina tetrica</i> Cooper and Grant.....	C
<i>Altiplecus cooperi</i> Stehli.....	R	<i>Rhipidomella hessensis</i> R.E. King.....	A
<i>Antiquatonia planumbona</i> Stehli.....	R	<i>Scacchinella americana</i> Stehli.....	C
<i>Antronaria dissona</i> Cooper and Grant.....	C	<i>Spinifrons quadrata</i> Stehli.....	A
<i>Antronaria mesicostalis</i> (Girty).....	R	<i>Stenoscisma multicostum</i> Stehli.....	VR
<i>Antronaria spectabilis</i> Cooper and Grant.....	VR	<i>Stenoscisma</i> sp. ....	VR
<i>Beecheria</i> sp. ....	VR	<i>Teguliferina conida</i> (Stehli).....	A
<i>Cancrinella sparsispinosa</i> Cooper and Grant.....	VR	<i>Thamnosia parvispinosa</i> (Stehli).....	C
<i>Cartorhium zoyei</i> Cooper and Grant.....	C	<i>Undellaria magnifica</i> Cooper and Grant.....	R
<i>Chonetinella biplicata</i> (R.E. King).....	C	LOCALITY N728f : Bone Spring Formation	
<i>Chonetinella victoriana</i> (Girty).....	R	<i>Acanthocrania platys</i> Cooper and Grant.....	VR
<i>Collemataria americana</i> (Girty).....	R	<i>Acanthocrania</i> sp. ....	VR
<i>Collemataria marshalli</i> (Stehli).....	C	<i>Acosarina dorsisulcata</i> Cooper and Grant.....	C
<i>Composita cracens</i> Cooper and Grant.....	C	<i>Acritosia teguliferoides</i> (R.E. King).....	C
<i>Composita</i> sp. ....	R	<i>Altiplecus cooperi</i> Stehli.....	VR
<i>Crenispirifer angulatus</i> (R.E. King).....	C	<i>Antiquatonia planumbona</i> Stehli.....	R
<i>Crurithyris inflata</i> Stehli.....	VR	<i>Antronaria dissona</i> Cooper and Grant.....	VR
<i>Crurithyris sulcata</i> Stehli.....	R	<i>Antronaria spectabilis</i> Cooper and Grant.....	A
<i>Cryptacanthia glabra</i> Cooper and Grant.....	VR	<i>Attenuatella texana</i> Stehli.....	R
<i>Derbyia crenulata</i> Girty.....	C	<i>Beecheria</i> sp. ....	VR
<i>Derbyia nasuta</i> Girty.....	A	<i>Cancrinella sparsispinosa</i> Cooper and Grant.....	C
<i>Derbyia</i> sp. ....	R	<i>Chonetinella biplicata</i> (R.E. King).....	R
<i>Dielasma diabloense</i> Stehli.....	C	<i>Chonetinella victoriana</i> (Girty).....	A
<i>Dielasma</i> sp. ....	VR	<i>Collemataria americana</i> (Girty).....	C
<i>Diplanus lamellatus</i> (R.E. King).....	A	<i>Composita cracens</i> Cooper and Grant.....	A
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty).....	C	<i>Cooperina</i> sp. ....	VR
<i>Elliotella minima</i> (Stehli).....	A	<i>Crenispirifer angulatus</i> (R.E. King).....	A
<i>Elliotella multicostata</i> Cooper and Grant.....	R	<i>Crurithyris inflata</i> Stehli.....	C
<i>Elliotella transversalis</i> (Stehli).....	R	<i>Crurithyris sulcata</i> Stehli.....	VA
<i>Enallosia rotundovata</i> Cooper and Grant.....	R	<i>Cryptacanthia glabra</i> Cooper and Grant.....	VR
<i>Eteletes stehlii</i> Cooper and Grant.....	A	<i>Cryptacanthia sinuata</i> (Stehli).....	R
<i>Eolytonia diabloensis</i> (Stehli).....	C	<i>Cyclacantharia</i> sp. 2.....	VR

	Rarity code		Rarity code
LOCALITY N728f - Continued		<i>Hustedia decollatensis</i> Cooper and Grant.....	C
<i>Derbyia crenulata</i> Girty.....	R	<i>Hustedia hessensis</i> R.E. King.....	VR
<i>Derbyia nasuta</i> Girty.....	R	<i>Meekella hessensis</i> R.E. King.....	C
<i>Dielasma diabloense</i> Stehli.....	R	<i>Neophricadothyris</i> sp. ....	C
<i>Dielasma microrhynchum</i> Cooper and Grant.....	R	<i>Rhipidomella hessensis</i> R.E. King.....	C
<i>Dielasma</i> sp. ....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
<i>Diplanus lamellatus</i> (R.E. King).....	C	<i>Stenosisma levicostum</i> Cooper and Grant.....	C
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty).....	VA	<i>Stenosisma</i> sp. ....	VR
<i>Elliottella minima</i> (Stehli).....	VR	<i>Wellerella? nitidula</i> Cooper and Grant.....	VA
<i>Elliottella transversalis</i> (Stehli).....	VA	LOCALITY N728h : Bone Spring Formation	
<i>Enallosia rotundovata</i> Cooper and Grant.....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant.....	R
<i>Enteleles stehlii</i> Cooper and Grant.....	A	<i>Acritosia teguliferoides</i> (R.E. King).....	R
<i>Eolytonia diabloensis</i> (Stehli).....	C	<i>Antronaria spectabilis</i> Cooper and Grant.....	R
<i>Eridmatus</i> sp. ....	VR	<i>Cancrinella sparsispinosa</i> Cooper and Grant.....	C
<i>Fimbrinia ovata</i> Cooper and Grant.....	R	<i>Chonetinella victoriana</i> (Girty).....	C
<i>Goniarina diabloensis</i> Cooper and Grant.....	R	<i>Collemataria americana</i> (Girty).....	VR
<i>Goniarina permiana</i> (Stehli).....	VA	<i>Composita cracens</i> Cooper and Grant.....	C
<i>Heteralosia</i> sp. 7 .....	VR	<i>Crenispirifer angulatus</i> (R.E. King).....	C
<i>Heterelasma geniculatum</i> Stehli.....	C	<i>Crurithyris sulcata</i> Stehli.....	A
<i>Heterelasma quadratum</i> Cooper and Grant.....	VR	<i>Cryptacanthia glabra</i> Cooper and Grant.....	VR
<i>Hustedia glomerosa</i> Cooper and Grant.....	VA	<i>Derbyia crenulata</i> Girty.....	C
<i>Kozlowskia kingi</i> Stehli.....	A	<i>Dielasma</i> sp. ....	R
<i>Leiorhynchoidea</i> sp. ....	VR	<i>Diplanus lamellatus</i> (R.E. King).....	C
<i>Lepidocrania</i> sp. ....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty).....	C
<i>Limbella victorioensis</i> Stehli.....	C	<i>Elliottella multicostata</i> Cooper and Grant.....	VA
<i>Linoproductus angustus</i> R.E. King.....	A	<i>Elliottella transversalis</i> (Stehli).....	C
<i>Martinia fucina</i> Cooper and Grant.....	R	<i>Enteleles stehlii</i> Cooper and Grant.....	C
<i>Meekella attenuata</i> Girty.....	VR	<i>Fimbrinia ovata</i> Cooper and Grant.....	R
<i>Meekella hessensis</i> R.E. King.....	C	<i>Goniarina permiana</i> (Stehli).....	A
<i>Meekella intermedia</i> Cooper and Grant.....	C	<i>Heteralosia</i> sp. ....	VR
<i>Metriolepis irenae</i> (Stehli).....	R	<i>Heterelasma quadratum</i> Cooper and Grant.....	VR
<i>Neophricadothyris catatona</i> Cooper and Grant.....	R	<i>Hustedia glomerosa</i> Cooper and Grant.....	A
<i>Nudauris diabloensis</i> Stehli.....	C	<i>Kozlowskia kingi</i> Stehli.....	C
<i>Orthotetella wolfcampensis</i> R.E. King.....	VR	<i>Leiorhynchoidea</i> sp. ....	VR
<i>Orthotichia irregularis</i> Cooper and Grant.....	VA	<i>Lepidocrania</i> sp. ....	VR
<i>Paranorella</i> sp. 2 .....	R	<i>Limbella victorioensis</i> Stehli.....	VR
<i>Poikilosakos informis</i> Cooper and Grant.....	R	<i>Linoproductus angustus</i> R.E. King.....	R
<i>Pontisia longicosta</i> (Stehli).....	C	<i>Meekella attenuata</i> Girty.....	C
<i>Pontisia nanas</i> (Stehli).....	A	<i>Meekella intermedia</i> Cooper and Grant.....	VR
<i>Pseudoleptodus granulosus</i> Cooper and Grant.....	VR	<i>Orthotichia irregularis</i> Cooper and Grant.....	VA
<i>Quadrochonetes girtyi</i> Stehli.....	VA	<i>Pontisia longicosta</i> (Stehli).....	R
<i>Reticulariina newelli</i> (Stehli).....	C	<i>Pontisia nanas</i> (Stehli).....	R
<i>Reticulariina tetrica</i> Cooper and Grant.....	C	<i>Quadrochonetes girtyi</i> Stehli.....	A
<i>Rhamnaria eximia</i> Cooper and Grant.....	R	<i>Reticulariina tetrica</i> Cooper and Grant.....	R
<i>Rhipidomella hessensis</i> R.E. King.....	A	<i>Rhamnaria eximia</i> Cooper and Grant.....	VR
<i>Scacchinella americana</i> Stehli.....	R	<i>Rhipidomella hessensis</i> R.E. King.....	C
<i>Spinifrons magna</i> Cooper and Grant.....	A	<i>Scacchinella americana</i> Stehli.....	VR
<i>Spyridiophora reticulata</i> (R.E. King).....	VR	<i>Spinifrons magna</i> Cooper and Grant.....	VA
<i>Stenosisma kalum</i> Stehli.....	C	<i>Spinifrons quadrata</i> Stehli.....	C
<i>Stenosisma multicostum</i> Stehli.....	C	<i>Stenosisma multicostum</i> Stehli.....	VR
<i>Stenosisma</i> sp. ....	VR	<i>Tautosia lenumbona</i> (Stehli).....	VR
<i>Tautosia lenumbona</i> (Stehli).....	C	<i>Thamnosia parvispinosa</i> (Stehli).....	C
<i>Tautosia magnisepta</i> (Stehli).....	R	LOCALITY N728i : Bell Canyon Formation, Lamar	
<i>Teguliferina conida</i> (Stehli).....	C	Member	
<i>Thamnosia parvispinosa</i> (Stehli).....	C	<i>Acanthocrania</i> sp. ....	VR
<i>Undellaria magnifica</i> Cooper and Grant.....	VR	<i>Allorhynchus venustum</i> Cooper and Grant.....	VR
LOCALITY N728g : Bone Spring Formation		<i>Aphaurosia scutata</i> Cooper and Grant.....	VR
<i>Acosarina mesoplatys</i> (R.E. King).....	VA	<i>Arionthia lamaria</i> Cooper and Grant.....	R
<i>Antronaria specialis</i> Cooper and Grant.....	C	<i>Arionthia polypleura</i> (Girty).....	VR
<i>Antronaria spectabilis</i> Cooper and Grant.....	C	<i>Astegosia subquadrata</i> (Girty).....	C
<i>Chonosteges limbatus</i> Cooper and Grant.....	R	<i>Collemataria spatulata</i> Cooper and Grant.....	R
<i>Composita cracens</i> Cooper and Grant.....	C	<i>Composita affinis</i> Girty.....	C
<i>Composita</i> sp. ....	VR	<i>Crenispirifer myllus</i> Cooper and Grant.....	R
<i>Heterelasma</i> sp. ....	VR	<i>Crurithyris guadalupensis</i> (Girty).....	R
<i>Heterelasma sulcificatum</i> Cooper and Grant.....	C		

	Rarity code		Rarity code
LOCALITY N728i - Continued		<i>Aphaurosia scutata</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	R	<i>Arionthia lamaria</i> Cooper and Grant .....	C
<i>Dielasma</i> sp. ....	R	<i>Astegosia subquadrata</i> (Girty) .....	VA
<i>Dielasma sulcatum</i> Girty .....	R	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	VR
<i>Elivina detecta</i> Cooper and Grant .....	R	<i>Callispirina rotunda</i> Cooper and Grant .....	C
<i>Fascicosta bella</i> Cooper and Grant .....	VR	<i>Cartorhium</i> sp. ....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	VR	<i>Cleiothyridina pilularis</i> Cooper and Grant .....	R
<i>Hustedia opsia</i> Cooper and Grant .....	C	<i>Cleiothyridina</i> sp. ....	VR
<i>Martinia rhomboidalis</i> Girty .....	C	<i>Collemataria spatulata</i> Cooper and Grant .....	R
<i>Ombonia guadalupensis</i> (Girty) .....	C	<i>Composita affinis</i> Girty .....	A
<i>Paraspiriferina billingsi</i> (Shumard) .....	R	<i>Composita</i> sp. ....	VR
<i>Plectelasma guadalupense</i> (Girty) .....	VR	<i>Crenispirifer myllus</i> Cooper and Grant .....	A
<i>Reticulariina</i> sp. ....	VR	<i>Crurithyris guadalupensis</i> (Girty) .....	VA
<i>Sarganostega pressa</i> Cooper and Grant .....	R	<i>Ctenalosia</i> sp. ....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR	<i>Deltarina magnicostata</i> Cooper and Grant .....	A
<i>Timorina ovata</i> (Girty) .....	VR	<i>Derbyia</i> sp. 1 .....	C
<i>Tropidelasma gregarium</i> (Girty) .....	A	<i>Derbyia</i> sp. ....	C
LOCALITY N728j : Cibolo Formation, Breccia Zone		<i>Dielasma cordatum</i> Girty .....	R
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	R
LOCALITY N728k : Cibolo Formation, Breccia Zone		<i>Dielasma sulcatum</i> Girty .....	C
<i>Scacchinella titan</i> Cooper and Grant .....	C	<i>Dielasma uniplicatum</i> Cooper and Grant .....	VR
LOCALITY N728-l : Cibolo Formation, Breccia Zone		<i>Dyoros</i> ( <i>Dyoros</i> ) <i>hillanus</i> (Girty) .....	C
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	<i>Echinosteges guadalupensis</i> (Shumard) .....	VR
<i>Acosarina</i> sp. ....	VR	<i>Eliva inflata</i> Cooper and Grant .....	C
<i>Acritosia teguliferoides</i> (R.E. King) .....	VR	<i>Eliva shumardi</i> Cooper and Grant .....	A
<i>Antronaria dissona</i> Cooper and Grant .....	R	<i>Fascicosta longaeva</i> (Girty) .....	R
<i>Chonetinella ciboloensis</i> Cooper and Grant .....	VR	<i>Geyerella americana</i> Girty .....	VR
<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	VR	<i>Heteralosia magnispina</i> Cooper and Grant .....	C
<i>Composita</i> sp. ....	VR	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Crenispirifer angulatus</i> (R.E. King) .....	VR	<i>Heterelasma venustulum</i> Girty .....	R
<i>Derbyia crenulata</i> Girty .....	R	<i>Hustedia rupinata</i> Cooper and Grant .....	VA
<i>Derbyia</i> aff. <i>nasuta</i> Girty .....	R	<i>Hustedia</i> sp. ....	A
<i>Derbyia</i> sp. ....	R	<i>Lirellaria costellata</i> Cooper and Grant .....	A
<i>Dielasma</i> sp. ....	VR	<i>Lirellaria crassa</i> Cooper and Grant .....	R
<i>Diplanus rarus</i> Cooper and Grant .....	C	<i>Martinia rhomboidalis</i> Girty .....	VA
<i>Diplanus</i> sp. ....	C	<i>Metriolepis nabis</i> Cooper and Grant .....	VR
<i>Echinauris?</i> sp. ....	R	<i>Notothyris</i> sp. ....	R
<i>Elliottella</i> cf. <i>varicostata</i> Cooper and Grant .....	R	<i>Ombonia guadalupensis</i> (Girty) .....	C
<i>Entelestes</i> sp. ....	VR	<i>Paraspiriferina billingsi</i> (Shumard) .....	A
<i>Eolyttonia gigantea</i> Cooper and Grant .....	C	<i>Paucispinifera latidorsata</i> (Girty) .....	VR
<i>Eolyttonia</i> sp. ....	A	<i>Plectelasma guadalupense</i> (Girty) .....	R
<i>Fimbrinia</i> sp. 3 .....	VR	<i>Pseudodielasma pinyonense</i> Cooper and Grant .....	R
<i>Hustedia</i> sp. ....	VR	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	R
<i>Hystriculina</i> sp. ....	R	<i>Rallacosta</i> sp. ....	VR
<i>Juresania?</i> sp. ....	VR	<i>Reticulariina</i> sp. ....	R
<i>Kozłowskia alata</i> Cooper and Grant .....	R	<i>Rigbyella girtyi</i> (Wanner and Sieverts) .....	VR
<i>Meekella attenuata</i> Girty .....	R	<i>Sarganostega pressa</i> Cooper and Grant .....	C
<i>Meekella prionota</i> Cooper and Grant .....	R	<i>Scapharina levis</i> Cooper and Grant .....	R
<i>Pontisia robusta</i> Cooper and Grant .....	VR	<i>Sestropoma cribriferum</i> Cooper and Grant .....	R
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Spiriferellina nuda</i> Cooper and Grant .....	C
<i>Stenosisma problematicum</i> Cooper and Grant .....	C	<i>Stenosisma abbreviatum</i> Cooper and Grant .....	R
<i>Teguliferina conida</i> (Stehli) .....	R	<i>Stenosisma</i> sp. ....	VR
LOCALITY N728m : Cibolo Formation, Breccia Zone		<i>Stenosisma trabeatum</i> Cooper and Grant .....	R
<i>Stenosisma multicostum</i> Stehli .....	VR	<i>Strigirhynchia elongata</i> Cooper and Grant .....	R
LOCALITY N728p : Bell Canyon Formation, Lamar Member		<i>Strigirhynchia indentata</i> (Shumard) .....	R
<i>Allorhynchus venustulum</i> Cooper and Grant .....	C	<i>Tautosia elegans</i> (Girty) .....	C
<i>Anomaloria anomala</i> Cooper and Grant .....	A	<i>Tautosia shumardiana</i> (Girty) .....	C
<i>Anteridocus swallowianus</i> (Shumard) .....	R	<i>Thamnosia capitanensis</i> (Girty) .....	VR
<i>Aphaurosia rotundata</i> Cooper and Grant .....	C	<i>Thamnosia</i> sp. ....	VR
		<i>Thedusia biconvexa</i> Cooper and Grant .....	R
		<i>Thedusia trigonalis</i> (Girty) .....	C
		<i>Thedusia ventricosa</i> Cooper and Grant .....	C
		<i>Timorina ovata</i> (Girty) .....	R
		<i>Tropidelasma gregarium</i> (Girty) .....	C
		<i>Xenosaria exotica</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY N728q : Bell Canyon Formation, Lamar Member		LOCALITY N728w : Cherry Canyon Formation, Getaway Member	
<i>Anteridocus swallowianus</i> (Shumard).....	VR	<i>Stenosisma repigratum</i> Cooper and Grant.....	VR
<i>Composita affinis</i> Girty.....	VR	LOCALITY N728x : Graham Formation	
<i>Crenispirifer myllus</i> Cooper and Grant.....	VR	<i>Gypospirifer gryphus</i> Cooper and Grant.....	VR
<i>Deltarina magnicostata</i> Cooper and Grant.....	VR	LOCALITY N728y : Hueco Formation	
<i>Derbyia</i> sp. ....	VR	<i>Gypospirifer nelsoni</i> Cooper and Grant.....	VR
<i>Dielasma sulcatum</i> Girty.....	VR	LOCALITY N729 : Bone Spring Formation	
<i>Eliva inflata</i> Cooper and Grant.....	VR	<i>Hustedia decollatensis</i> Cooper and Grant.....	VR
<i>Geyerella americana</i> Girty.....	VR	<i>Isogramma</i> sp. ....	VR
<i>Heterelasma shumardianum</i> Girty.....	VR	<i>Meekella hessensis</i> R.E. King.....	R
<i>Hustedia rupinata</i> Cooper and Grant.....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR
<i>Martinia rhomboidalis</i> Girty.....	C	LOCALITY N729e : Hess Formation	
<i>Metriolepis nabis</i> Cooper and Grant.....	VR	<i>Reticulatia</i> sp. ....	VR
<i>Ombonia guadalupensis</i> (Girty).....	VR	LOCALITY N729f : Skinner Ranch Formation, Poplar Tank Member	
<i>Paraspiriferina billingsi</i> (Shumard).....	VR	<i>Paranorella</i> sp. 2 .....	VR
<i>Plectelasma guadalupense</i> (Girty).....	VR	LOCALITY N729h : Skinner Ranch Formation, Sullivan Peak Member	
<i>Sestropoma cribriferum</i> Cooper and Grant.....	R	<i>Antronaria speciosa</i> Cooper and Grant.....	VR
<i>Spiriferella sulcifer</i> (Shumard).....	VR	LOCALITY N729i : Skinner Ranch Formation, Decie Ranch Member	
<i>Thedusia trigonalis</i> (Girty).....	VR	<i>Rugaria crassa</i> Cooper and Grant.....	VR
<i>Thedusia ventricosa</i> Cooper and Grant.....	VR	<i>Stenosisma problematicum</i> Cooper and Grant.....	VR
<i>Timorina ovata</i> (Girty).....	VR	LOCALITY N729j : Skinner Ranch Formation	
<i>Tropidelasma gregarium</i> (Girty).....	R	<i>Enteleter rotundobesus</i> Cooper and Grant.....	VR
<i>Xenosteges umbonatus</i> Cooper and Grant.....	VR	<i>Stenosisma pyraustoides</i> Cooper and Grant.....	VR
LOCALITY N728r : Bell Canyon Formation, Lamar Member		LOCALITY N729l : Skinner Ranch Formation	
<i>Allorhynchus</i> sp. ....	VR	<i>Geyerella hessi</i> Cooper and Grant.....	VR
<i>Allorhynchus venustulum</i> Cooper and Grant.....	R	<i>Limbella limbata</i> Cooper and Grant.....	VR
<i>Aneuthelasma amygdalinum</i> Cooper and Grant.....	VR	LOCALITY N729m : Skinner Ranch Formation, Sullivan Peak Member	
<i>Anteridocus swallowianus</i> (Shumard).....	C	<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR
<i>Composita pyriformis</i> Cooper and Grant.....	VR	LOCALITY N729o : Skinner Ranch Formation, Sullivan Peak Member	
<i>Elivina detecta</i> Cooper and Grant.....	VR	<i>Oncosarina spinicostata</i> Cooper and Grant.....	VR
<i>Fascicosta longaeva</i> (Girty).....	VR	LOCALITY N729p : Skinner Ranch Formation, Sullivan Peak Member	
<i>Heterelasma shumardianum</i> Girty.....	VR	<i>Glyptosteges angustus</i> (R.E. King).....	VR
<i>Hustedia</i> sp. ....	VR	<i>Megousia</i> sp. ....	VR
<i>Martinia rhomboidalis</i> Girty.....	R	<i>Stenosisma hadrum</i> Cooper and Grant.....	VR
<i>Paraspiriferina evax</i> (Girty).....	VR	<i>Torynechus alectorius</i> Cooper and Grant.....	R
<i>Pseudoleptodus guadalupensis</i> (Stehli).....	VR	LOCALITY N729q : Skinner Ranch Formation, Poplar Tank Member	
<i>Tautosia shumardiana</i> (Girty).....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
LOCALITY N728s : Bell Canyon Formation, Lamar Member		LOCALITY N729r : Cathedral Mountain Formation	
<i>Astegosia subquadrata</i> (Girty).....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant.....	VR
<i>Pseudoleptodus guadalupensis</i> (Stehli).....	VR	<i>Neospirifer mansuetus</i> Cooper and Grant.....	VR
<i>Stenosisma trabeatum</i> Cooper and Grant.....	VR	LOCALITY N729u : Hess Formation	
LOCALITY N728t : Bone Spring Formation		<i>Glyptosteges angustus</i> (R.E. King).....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant.....	R	LOCALITY N729z : Cathedral Mountain Formation	
<i>Chonetinella biplicata</i> (R.E. King).....	VR	<i>Stenosisma triquetrum</i> Cooper and Grant.....	VR
<i>Crenispirifer angulatus</i> (R.E. King).....	VR	LOCALITY N730 : Cherry Canyon Formation, Getaway Member	
<i>Crurithyris sulcata</i> Stehli.....	VR	<i>Acanthocrania conferta</i> Cooper and Grant.....	VR
<i>Enteleter stehlii</i> Cooper and Grant.....	VR		
<i>Hustedia</i> sp. ....	VR		
<i>Meekella angustiplicata</i> Cooper and Grant.....	VR		
<i>Quadrochonetes girtyi</i> Stehli.....	VR		
<i>Rhipidomella hessensis</i> R.E. King.....	VR		
<i>Thamnosia parvispinosa</i> (Stehli).....	VR		
LOCALITY N728u : Capitan Formation			
<i>Anteridocus swallowianus</i> (Shumard).....	VR		
LOCALITY N728v : Bone Spring Formation			
<i>Enteleter</i> sp. ....	VR		
<i>Meekella hessensis</i> R.E. King.....	VR		

	Rarity code		Rarity code
LOCALITY N730 - Continued			
<i>Allorhynchus formulosum</i> Cooper and Grant.....	VR	<i>Enteleles plummeri</i> R.E. King .....	VR
<i>Bothrionia pulchra</i> Cooper and Grant.....	VR	<i>Institella leonardensis</i> (R.E. King).....	VR
<i>Cartorhium retusum</i> Cooper and Grant.....	VR	<i>Kochiproductus</i> sp. ....	VR
<i>Cenorhynchia frasca</i> Cooper and Grant.....	VR	<i>Linoproductus</i> sp. ....	VR
<i>Composita parasulcata</i> Cooper and Grant.....	VR	<i>Rhynchopora hebetata</i> Cooper and Grant.....	VR
<i>Composita prospera</i> Cooper and Grant.....	R	<i>Waagenoconcha convexa</i> Cooper and Grant.....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	C	LOCALITY N730r : Skinner Ranch Formation	
<i>Derbyia filosa</i> Cooper and Grant.....	VR	<i>Composita apheles</i> Cooper and Grant.....	VR
<i>Derbyia pannucia</i> Cooper and Grant.....	VR	<i>Dielasma</i> sp. ....	VR
<i>Dielasma pictile</i> Cooper and Grant.....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant.....	R	<i>Stenosisma problematicum</i> Cooper and Grant.....	VR
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>auriculatus</i> Cooper and Grant.....	VR	LOCALITY N730s : Skinner Ranch Formation	
<i>Dyoros</i> ( <i>Tetragonetes</i> ) <i>complanatus</i> Cooper and Grant.....	R	<i>Chonosteges variabilis</i> Cooper and Grant.....	VR
<i>Echinauris productelloides</i> Cooper and Grant.....	R	<i>Compressoproductus parvus</i> Cooper and Grant.....	VR
<i>Echinosteges tuberculatus</i> (R.E. King).....	VR	<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Eolyttonia progressa</i> Cooper and Grant.....	C	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
<i>Grandaurispina undulata</i> Cooper and Grant.....	VR	LOCALITY N730u : Cathedral Mountain Formation	
<i>Heteralosia magnispina</i> Cooper and Grant.....	VR	<i>Institella leonardensis</i> (R.E. King).....	VR
<i>Heterelasma</i> sp. ....	VR	<i>Torynechus caelatus</i> Cooper and Grant.....	VR
<i>Hustedia citeria</i> Cooper and Grant.....	C	<i>Xestosia schucherti</i> (R.E. King).....	VR
<i>Hustedia hapala</i> Cooper and Grant.....	R	LOCALITY N730v : Skinner Ranch Formation	
<i>Hustedia tomea</i> Cooper and Grant.....	VR	<i>Neophricadothyris</i> sp. ....	VR
<i>Leiorhynchoidea scelestia</i> Cooper and Grant.....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
<i>Lepidocrania sublamellosa</i> Cooper and Grant.....	VR	<i>Stenosisma pansum</i> Cooper and Grant.....	VR
<i>Liosotella wordensis</i> (R.E. King).....	C	LOCALITY N731 : Bell Canyon Formation, Hegler	
<i>Meekella skenoides</i> Girty.....	C	Member	
<i>Neophricadothyris conara</i> Cooper and Grant.....	VR	<i>Acanthocrania</i> sp. ....	VR
<i>Paraspiriferina paginata</i> Cooper and Grant.....	VR	<i>Acanthocrania vasta</i> Cooper and Grant.....	R
<i>Paucispiniifera tumida</i> Cooper and Grant.....	VR	<i>Allorhynchus</i> sp. ....	R
<i>Petasmatherus opulus</i> Cooper and Grant.....	VR	<i>Allorhynchus venustulum</i> Cooper and Grant.....	R
<i>Pseudodielasma magnum</i> Cooper and Grant.....	VR	<i>Altiplecus?</i> <i>deltosus</i> Cooper and Grant.....	R
<i>Reticulariina girtyi</i> Cooper and Grant.....	R	<i>Altiplecus extensus</i> Cooper and Grant.....	VR
<i>Rhamnaria sulcata</i> Cooper and Grant.....	R	<i>Anteridocus bicostatus</i> Cooper and Grant.....	VR
<i>Rhynchopora guadalupensis</i> Cooper and Grant.....	VR	<i>Anteridocus subcarinatus</i> Cooper and Grant.....	VR
<i>Spiriferella</i> sp. ....	VR	<i>Anteridocus swallowianus</i> (Shumard).....	C
<i>Thedusia dischides</i> Cooper and Grant.....	R	<i>Aphaurosia scutata</i> Cooper and Grant.....	VR
<i>Undulella guadalupensis</i> Cooper and Grant.....	R	<i>Arionthia lamaria</i> Cooper and Grant.....	VR
<i>Wellerella girtyi seorsa</i> Cooper and Grant.....	R	<i>Arionthia polypleura</i> (Girty).....	R
<i>Xenosteges quadratus</i> Cooper and Grant.....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard).....	VA
LOCALITY N730a : Lenox Hills Formation		<i>Bryorhynchus gratiosum</i> (Girty).....	R
<i>Stenosisma</i> sp. 1 .....	VR	<i>Cartorhium</i> sp. ....	R
LOCALITY N730c : Neal Ranch Formation		<i>Chonetinetes</i> sp. ....	VR
<i>Crurithyris tumibilis</i> Cooper and Grant.....	VR	<i>Chonetinetes varians</i> Cooper and Grant.....	A
LOCALITY N730k : Skinner Ranch Formation, Sullivan		<i>Composita emarginata</i> Girty.....	R
Peak Member		<i>Composita pyriformis</i> Cooper and Grant.....	A
<i>Neophricadothyris catatona</i> Cooper and Grant.....	VR	<i>Composita</i> sp. ....	C
LOCALITY N730m : Gaptank Formation		<i>Cooperina inexpectata</i> Termier, Termier and Pajaud.....	R
<i>Echinaria</i> cf. <i>moorei</i> (Dunbar and Condra).....	VR	<i>Cooperina</i> sp. ....	VR
LOCALITY N730n : Gaptank Formation, Uddenites		<i>Craspedona newelli</i> Cooper and Grant.....	C
Member		<i>Crenispirifer jubatus</i> Cooper and Grant.....	C
<i>Nudauris splendens</i> Cooper and Grant.....	VR	<i>Deltarina magnicostata</i> Cooper and Grant.....	R
LOCALITY N730o : Skinner Ranch Formation		<i>Derbyia</i> sp. 1 .....	R
<i>Compressoproductus parvus</i> Cooper and Grant.....	VR	<i>Derbyia</i> sp. ....	A
<i>Derbyia</i> sp. ....	VR	<i>Derbyia texta</i> Cooper and Grant.....	R
<i>Oncosarina</i> sp. ....	VR	<i>Dielasma cordatum</i> Girty.....	VR
<i>Spyridiophora reticulata</i> (R.E. King).....	VR	<i>Dielasma</i> sp. ....	C
LOCALITY N730q : Cathedral Mountain Formation		<i>Dielasma subcirculare</i> Cooper and Grant.....	VR
<i>Compressoproductus thomasi</i> Cooper and Grant.....	VR	<i>Dielasma sulcatum</i> Girty.....	R
		<i>Dyoros</i> ( <i>Dyoros</i> ) <i>attenuatus</i> Cooper and Grant.....	VR
		<i>Dyoros</i> ( <i>Dyoros</i> ) <i>intrepidus</i> Cooper and Grant.....	C
		<i>Dyoros</i> ( <i>Dyoros</i> ) <i>robustus</i> Cooper and Grant.....	C
		<i>Echinosteges guadalupensis</i> (Shumard).....	VR



	Rarity code		Rarity code
LOCALITY N731 - Continued			
<i>Eliva shumardi</i> Cooper and Grant .....	VR	<i>Timorina attenuata</i> Cooper and Grant .....	VR
<i>Elivina? annectans</i> Cooper and Grant .....	C	<i>Timorina ovata</i> (Girty) .....	R
<i>Fascicosta bella</i> Cooper and Grant .....	VR	<i>Tropidelasma gregarium</i> (Girty) .....	VR
<i>Fascicosta elongata</i> Cooper and Grant .....	R	<i>Xenosaria exotica</i> Cooper and Grant .....	R
<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant .....	VR	<i>Xenosteges umbonatus</i> Cooper and Grant .....	C
<i>Glossothyropsis polita</i> Cooper and Grant .....	R	LOCALITY N731b : Cathedral Mountain Formation	
<i>Glossothyropsis robusta</i> (Girty) .....	C	<i>Acosarina mesoplatys</i> (R.E. King) .....	R
<i>Grandaurispina</i> sp. 4 .....	VR	<i>Agelesia triagonalis</i> (R.E. King) .....	VR
<i>Heteralosia magnispina</i> Cooper and Grant .....	C	<i>Cenorhynchia mitigata</i> Cooper and Grant .....	R
<i>Heteralosia paucispinosa</i> Cooper and Grant .....	R	<i>Chonosteges pulcher</i> Cooper and Grant .....	VR
<i>Heteralosia tenuispina</i> Cooper and Grant .....	R	<i>Composita</i> sp. ....	R
<i>Heterelasma shumardianum</i> Girty .....	R	<i>Enteleles plummeri</i> R.E. King .....	C
<i>Heterelasma</i> sp. ....	VR	<i>Enteleles</i> sp. ....	VR
<i>Hustedia demissa</i> Cooper and Grant .....	VR	<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	VA	<i>Hustedia lusca</i> Cooper and Grant .....	C
<i>Hustedia samiata</i> Cooper and Grant .....	C	<i>Hustedia</i> sp. ....	VR
<i>Hustedia</i> sp. ....	A	<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Lepidocrania</i> sp. ....	R	<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR
<i>Liosotella opima</i> (Girty) .....	C	<i>Linoproductus</i> sp. ....	VR
<i>Madarosia anterolamellata</i> Cooper and Grant .....	VR	<i>Neophricadothyris bullata</i> Cooper and Grant .....	VR
<i>Metriolepis nabis</i> Cooper and Grant .....	R	<i>Neophricadothyris</i> sp. ....	VR
<i>Metriolepis pedicosa</i> Cooper and Grant .....	R	<i>Rhipidomella hispidula</i> Cooper and Grant .....	C
<i>Metriolepis</i> sp. ....	R	<i>Rugatia paraindica</i> (McKee) .....	VR
<i>Micraphelia scitula</i> Cooper and Grant .....	VA	<i>Stenosisma</i> sp. ....	VR
<i>Micraphelia</i> sp. ....	C	<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR
<i>Micraphelia subalata</i> Cooper and Grant .....	C	<i>Tautosia fastigiata</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	C	LOCALITY N731e : Road Canyon Formation	
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	C	<i>Paraspiriferina cellulana</i> Cooper and Grant .....	VR
<i>Paucispinifera indentata</i> (Girty) .....	R	LOCALITY N731f : Skinner Ranch Formation, Poplar	
<i>Paucispinifera latidorsata</i> (Girty) .....	R	Tank Member	
<i>Paucispinifera</i> sp. ....	R	<i>Derbyia</i> sp. ....	VR
<i>Paucispinifera spinosa</i> Cooper and Grant .....	C	LOCALITY N731g : Skinner Ranch Formation, Sullivan	
<i>Petrocrania exasperata</i> Cooper and Grant .....	VR	Peak Member	
<i>Petrocrania septifera</i> Cooper and Grant .....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Phrenophoria perplexa</i> Cooper and Grant .....	VR	LOCALITY N731h : Word Formation, Willis Ranch	
<i>Plectelasma guadalupense</i> (Girty) .....	C	Member	
<i>Pseudodielasma brilli</i> Cooper and Grant .....	C	<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR
<i>Pseudodielasma pinyonense</i> Cooper and Grant .....	C	LOCALITY N731i : Neal Ranch Formation	
<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	C	<i>Reticulatia</i> sp. 1 .....	VR
<i>Pseudoleptodus?</i> sp. 3 .....	R	LOCALITY N731j : Capitan Formation	
<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR	<i>Liosotella popei</i> (Shumard) .....	VR
<i>Rallacosta imporcata</i> Cooper and Grant .....	VR	LOCALITY N731k : Lenox Hills Formation	
<i>Reticulariina echinata</i> Cooper and Grant .....	R	<i>Linoproductus semisulcatus</i> Cooper and Grant .....	VR
<i>Reticulariina laxa</i> (Girty) .....	R	LOCALITY N731-l : Neal Ranch Formation	
<i>Reticulariina phoxa</i> Cooper and Grant .....	VR	<i>Linoproductus</i> sp. ....	VR
<i>Reticulariina</i> sp. ....	C	LOCALITY N731m : Word Formation, Willis Ranch	
<i>Reticulariina welleri</i> (Girty) .....	C	Member	
<i>Rhamnaria shumardi</i> Cooper and Grant .....	VR	<i>Allorhynchus</i> sp. ....	VR
<i>Rhamnaria</i> sp. ....	VR	<i>Composita</i> sp. ....	VR
<i>Sarganostega pressa</i> Cooper and Grant .....	C	<i>Costispinifera rugatula</i> (Girty) .....	C
<i>Sarganostega transversalis</i> Cooper and Grant .....	C	<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR
<i>Scapharina levis</i> Cooper and Grant .....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant .....	VR
<i>Scapharina quadrata</i> Cooper and Grant .....	R	<i>Enteleles wordensis</i> R.E. King .....	VR
<i>Scapharina rugosa</i> Cooper and Grant .....	C	<i>Liosotella wordensis</i> (R.E. King) .....	R
<i>Sestropoma cribriferum</i> Cooper and Grant .....	A	<i>Meekella skenoides</i> Girty .....	VR
<i>Spiriferella</i> sp. ....	VR	<i>Megousia</i> sp. ....	VR
<i>Spiriferella sulcifer</i> (Shumard) .....	C	<i>Neospirifer amphigyus</i> Cooper and Grant .....	VR
<i>Spiriferellina nuda</i> Cooper and Grant .....	C	<i>Paucispinifera</i> sp. ....	VR
<i>Stenosisma aberrans</i> Cooper and Grant .....	VR	<i>Rhamnaria kingorum delicata</i> Muir-Wood and Cooper .....	VR
<i>Stenosisma</i> sp. ....	VR		
<i>Tautosia shumardiana</i> (Girty) .....	VR		
<i>Thamnosia capitanensis</i> (Girty) .....	R		
<i>Thedusia trigonalis</i> (Girty) .....	C		
<i>Thedusia ventricosa</i> Cooper and Grant .....	C		

	Rarity code		Rarity code
LOCALITY N731m - Continued		LOCALITY N732 : Cherry Canyon Formation, Getaway	
<i>Spiriferinaella</i> sp. ....	VR	Member	
<i>Yakovlevia hessorum</i> Cooper and Grant .....	VR	<i>Acanthocrania conferta</i> Cooper and Grant .....	VR
LOCALITY N731n : Cathedral Mountain Formation		<i>Allorhynchus circulare</i> Cooper and Grant .....	R
<i>Agelesia triangularis</i> (R.E. King) .....	VR	<i>Bothrionia pulchra</i> Cooper and Grant .....	VR
<i>Compressoproductus thomasi</i> Cooper and Grant .....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	R
<i>Institella leonardensis</i> (R.E. King) .....	VR	<i>Cancrinella</i> sp. ....	VR
LOCALITY N731o : Skinner Ranch Formation		<i>Cartorhium retusum</i> Cooper and Grant .....	R
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	<i>Composita enormis</i> Cooper and Grant .....	VR
<i>Megousia</i> sp. ....	VR	<i>Composita parasulcata</i> Cooper and Grant .....	R
<i>Torynechus alectorius</i> Cooper and Grant .....	VR	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR
LOCALITY N731p : Word Formation		<i>Crenispirifer effrenus</i> Cooper and Grant .....	R
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	VR	<i>Cyclacantharia kingorum</i> Cooper and Grant .....	C
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	R
<i>Echinauris</i> sp. ....	VR	<i>Derbyia pannucia</i> Cooper and Grant .....	VR
<i>Enteleles wordensis</i> R.E. King .....	VR	<i>Derbyia texta</i> Cooper and Grant .....	C
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR	<i>Dielasma pictile</i> Cooper and Grant .....	VR
<i>Meekella skenoides</i> Girty .....	VR	<i>Dielasma</i> sp. ....	R
<i>Rhamnaria kingorum delicata</i> Muir-Wood and Cooper .....	VR	<i>Dielasma sulcatum</i> Girty .....	VR
LOCALITY N731q : Cathedral Mountain Formation		<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	R
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	R
LOCALITY N731t : Cathedral Mountain Formation		<i>Dyoros (Tetragonetes) auriculatus</i> Cooper and Grant .....	R
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Dyoros (Tetragonetes) complanatus</i> Cooper and Grant .....	C
<i>Enteleles</i> sp. ....	VR	<i>Echinauris productelloides</i> Cooper and Grant .....	C
<i>Neophricadothyris</i> sp. ....	R	<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR
<i>Peniculauris</i> sp. 1 .....	VR	<i>Eolyttonia progressa</i> Cooper and Grant .....	C
<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR	<i>Eolyttonia</i> sp. ....	VR
<i>Scacchinella</i> sp. ....	VR	<i>Glossothyropsis</i> sp. 1 (Girty) .....	VR
<i>Stenosisma exutum</i> Cooper and Grant .....	VR	<i>Grandaurispina</i> sp. ....	VR
LOCALITY N731u : Word Formation		<i>Grandaurispina undulata</i> Cooper and Grant .....	R
<i>Allorhynchus</i> sp. ....	VR	<i>Heteralosia magnispina</i> Cooper and Grant .....	R
<i>Allorhynchus triangulatum</i> Cooper and Grant .....	VR	<i>Heterelasma concavum</i> Cooper and Grant .....	VR
<i>Cenorhynchia pentagonalis</i> Cooper and Grant .....	R	<i>Hustedia citeria</i> Cooper and Grant .....	A
<i>Composita</i> sp. ....	R	<i>Hustedia hapala</i> Cooper and Grant .....	C
<i>Costispinifera costata</i> (R.E. King) .....	C	<i>Hustedia tomea</i> Cooper and Grant .....	R
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR	<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	VR	<i>Liosotella wordensis</i> (R.E. King) .....	C
<i>Dyoros (Dyoros) convexus</i> Cooper and Grant .....	VR	<i>Martinia causaria</i> Cooper and Grant .....	C
<i>Enteleles wordensis</i> R.E. King .....	VR	<i>Meekella skenoides</i> Girty .....	A
<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR	<i>Megousia definita</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	VR	<i>Metriolepis exserta</i> Cooper and Grant .....	R
<i>Liosotella wordensis</i> (R.E. King) .....	C	<i>Neophricadothyris conara</i> Cooper and Grant .....	R
<i>Meekella skenoides</i> Girty .....	VR	<i>Ombonia</i> sp. 1 .....	R
<i>Megousia</i> sp. ....	VR	<i>Paraspiriferina paginata</i> Cooper and Grant .....	R
<i>Paraspiriferina laqueata</i> Cooper and Grant .....	VR	<i>Paucispinifera</i> sp. ....	R
<i>Paucispinifera</i> sp. ....	VR	<i>Petasmatherus opulus</i> Cooper and Grant .....	R
<i>Rhamnaria kingorum cf. delicata</i> Muir-Wood and Cooper .....	VR	<i>Phrenophoria pinguiformis</i> Cooper and Grant .....	VR
<i>Rhynchopora palumbula</i> Cooper and Grant .....	R	<i>Plectelasma nitidum</i> Cooper and Grant .....	VR
<i>Spiriferinaella</i> sp. ....	VR	<i>Pseudodielasma magnum</i> Cooper and Grant .....	VR
<i>Stenosisma renode</i> Cooper and Grant .....	R	<i>Pseudodielasma</i> sp. ....	R
LOCALITY N731z : Word Formation, Appel Ranch		<i>Pseudoleptodus annosus</i> Cooper and Grant .....	VR
Member		<i>Pseudoleptodus getawayensis</i> Stehli .....	VR
<i>Bryorhynchus plicatum</i> Cooper and Grant .....	R	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR
<i>Cancrinella distorta</i> Cooper and Grant .....	VR	<i>Reticulariina girtyi</i> Cooper and Grant .....	R
<i>Leiorhynchoidea scelestia</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Linoproductus nasutus</i> R.E. King .....	C	<i>Rhamnaria sulcata</i> Cooper and Grant .....	C
<i>Liosotella irregularis</i> Cooper and Grant .....	VR	<i>Rhynchopora guadalupensis</i> Cooper and Grant .....	VR
<i>Neophricadothyris conara</i> Cooper and Grant .....	VR	<i>Sarganostega murata</i> Cooper and Grant .....	R
<i>Spiriferella clypeata</i> Cooper and Grant .....	R	<i>Spiriferella</i> sp. ....	R
		<i>Tautosia transenna</i> Cooper and Grant .....	R
		<i>Texarina elongata</i> Cooper and Grant .....	VR
		<i>Tropidelasma furcillatum</i> Cooper and Grant .....	C
		<i>Tropidelasma</i> sp. ....	VR
		<i>Undulella guadalupensis</i> Cooper and Grant .....	C
		<i>Waagenoconcha magnifica</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY N732 - Continued			
<i>Wellerella girtyi seorsa</i> Cooper and Grant.....	R	<i>Reticulariina</i> sp. ....	C
<i>Xenosteges quadratus</i> Cooper and Grant .....	C	<i>Sarganostega pressa</i> Cooper and Grant.....	R
LOCALITY N732a : Bell Canyon Formation, Hegler			
Member		<i>Sarganostega transversalis</i> Cooper and Grant.....	R
<i>Acanthocrania</i> sp. ....	VR	<i>Scapharina levis</i> Cooper and Grant.....	VR
<i>Allorhynchus</i> sp. ....	VR	<i>Scapharina quadrata</i> Cooper and Grant.....	VR
<i>Altiplecus? deltosus</i> Cooper and Grant.....	R	<i>Scapharina rugosa</i> Cooper and Grant.....	R
<i>Altiplecus extensus</i> Cooper and Grant.....	R	<i>Sestropoma cribriferum</i> Cooper and Grant .....	C
<i>Anteridocus bicostatus</i> Cooper and Grant .....	R	<i>Spiriferella sulcifer</i> (Shumard) .....	C
<i>Anteridocus swallowianus</i> (Shumard).....	VR	<i>Thamnosia capitanensis</i> (Girty).....	VR
<i>Arionthia polypleura</i> (Girty).....	R	<i>Theodusia magna</i> Cooper and Grant .....	VR
<i>Bryorhynchus bisulcatum</i> (Shumard).....	C	<i>Theodusia trigonalis</i> (Girty) .....	R
<i>Cancrinella</i> sp. ....	VR	<i>Theodusia ventricosa</i> Cooper and Grant.....	C
<i>Cartorhium</i> sp. ....	R	<i>Timorina attenuata</i> Cooper and Grant.....	VR
<i>Chonetinetes</i> sp. ....	C	<i>Timorina ovata</i> (Girty).....	VR
<i>Chonetinetes varians</i> Cooper and Grant.....	A	<i>Tropidelasma gregarium</i> (Girty).....	VR
<i>Composita pyriformis</i> Cooper and Grant.....	C	<i>Xenosaria exotica</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	R	<i>Xenosteges umbonatus</i> Cooper and Grant.....	C
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud.....	R	LOCALITY N732b : Skinner Ranch Formation, Decie	
<i>Craspedona newelli</i> Cooper and Grant.....	VR	Ranch Member	
<i>Crenispirifer jubatus</i> Cooper and Grant .....	R	<i>Eolyttonia gigantea</i> Cooper and Grant.....	VR
<i>Crurithyris</i> sp. ....	VR	LOCALITY N732c : Word Formation, Lens	
<i>Ctenalosia fixata</i> Cooper and Stehli.....	VR	<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	VR
<i>Ctenalosia rotunda</i> Cooper and Grant.....	VR	<i>Arionthia germana</i> Cooper and Grant.....	R
<i>Derbyia</i> sp. ....	A	<i>Cartorhium chelomatum</i> Cooper and Grant.....	VR
<i>Dielasma cordatum</i> Girty.....	VR	<i>Collemataria elongata</i> Cooper and Grant.....	R
<i>Dielasma rigbyi</i> Cooper and Grant .....	R	<i>Composita enormis</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	R	<i>Composita parasilcata</i> Cooper and Grant.....	R
<i>Dielasma sulcatum</i> Girty .....	VR	<i>Cyclacantharia kingorum</i> Cooper and Grant.....	VR
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant.....	VR	<i>Derbyia texta</i> Cooper and Grant.....	R
<i>Dyoros (Dyoros) robustus</i> Cooper and Grant .....	R	<i>Dielasma</i> sp. ....	VR
<i>Echinosteges guadalupensis</i> (Shumard).....	VR	<i>Dyoros (Dyoros) convexus</i> Cooper and Grant .....	A
<i>Fascicosta elongata</i> Cooper and Grant.....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	C
<i>Glossothyropsis juvenis</i> Cooper and Grant.....	VR	<i>Echinosteges tuberculatus</i> (R.E. King).....	VR
<i>Glossothyropsis polita</i> Cooper and Grant.....	VR	<i>Grandaurispina gibbosa</i> Cooper and Grant .....	R
<i>Glossothyropsis robusta</i> (Girty).....	VR	<i>Heteralosia hystricula</i> (Girty).....	VR
<i>Grandaurispina</i> sp. ....	VR	<i>Hustedia</i> sp. ....	R
<i>Heteralosia magnispina</i> Cooper and Grant.....	C	<i>Liosotella tetragonalis</i> Cooper and Grant.....	VR
<i>Heteralosia paucispinosa</i> Cooper and Grant.....	VR	<i>Liosotella wordensis</i> (R.E. King).....	R
<i>Heterelasma</i> sp. ....	VR	<i>Meekella skenoides</i> Girty .....	VR
<i>Hustedia demissa</i> Cooper and Grant.....	R	<i>Paraspiriferina rotundata</i> Cooper and Grant.....	VR
<i>Hustedia opsia</i> Cooper and Grant .....	C	<i>Paucispinifera quadrata</i> Cooper and Grant .....	R
<i>Hustedia rupinata</i> Cooper and Grant .....	VA	<i>Pseudoleptodus grandis</i> Cooper and Grant.....	VR
<i>Hustedia</i> sp. ....	A	<i>Reticulariina cerina</i> Cooper and Grant .....	R
<i>Lamellosia lamellosa</i> Cooper and Grant .....	R	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C
<i>Liosotella opima</i> (Girty).....	R	<i>Spiriferella clypeata</i> Cooper and Grant .....	R
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Spiriferellina hilli</i> (Girty).....	VR
<i>Metriolepis pedicosa</i> Cooper and Grant.....	R	<i>Spiriferinaella scalpata</i> Cooper and Grant.....	VR
<i>Metriolepis</i> sp. ....	VR	<i>Stenoscisma renode</i> Cooper and Grant.....	VR
<i>Micraphelia scitula</i> Cooper and Grant.....	VA	<i>Tropidelasma</i> sp. ....	VR
<i>Micraphelia subalata</i> Cooper and Grant .....	C	<i>Xenosteges quadratus</i> Cooper and Grant .....	VR
<i>Notothyris</i> sp. ....	VR	LOCALITY N732d : Skinner Ranch Formation, Dugout	
<i>Paraspiriferina billingsi</i> (Shumard).....	C	Mtn Member	
<i>Paucispinifera indentata</i> (Girty) .....	R	<i>Glyptosteges intricatus</i> Cooper and Grant.....	VR
<i>Paucispinifera latidorsata</i> (Girty) .....	VR	<i>Sceletonia crassa</i> Cooper and Grant.....	VR
<i>Petrocrania</i> sp. ....	R	LOCALITY N732e : Skinner Ranch Formation, Dugout	
<i>Phrenophoria perplexa</i> Cooper and Grant.....	VR	Mtn Member	
<i>Phrenophoria pinguis</i> (Girty).....	VR	<i>Acritosia solida</i> Cooper and Grant.....	VR
<i>Plectelasma guadalupense</i> (Girty).....	R	<i>Choanodus perfectus</i> Cooper and Grant.....	VR
<i>Pseudodielasma brilli</i> Cooper and Grant .....	R	<i>Choanodus</i> sp. ....	VR
<i>Pseudoleptodus guadalupensis</i> (Stehli).....	C	<i>Chonosteges variabilis</i> Cooper and Grant.....	R
<i>Rallacosta imporata</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	VR
<i>Reticulariina echinata</i> Cooper and Grant.....	VR	<i>Derbyia</i> sp. ....	VR

	Rarity code		Rarity code
LOCALITY N732e - Continued			
<i>Dielasma</i> sp. ....	VR	<i>Echinosteges</i> cf. <i>tuberculatus</i> (R.E. King) .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty) .....	R	<i>Enteleles</i> <i>exiguus</i> Cooper and Grant .....	A
<i>Echinauris</i> <i>irregularis</i> Cooper and Grant .....	C	<i>Enteleles</i> sp. ....	A
<i>Enteleles</i> sp. ....	VR	<i>Heteralosia</i> sp. ....	VR
<i>Glyptosteges</i> <i>intricatus</i> Cooper and Grant .....	C	<i>Heterelasma</i> sp. ....	R
<i>Hercosia</i> cf. <i>uddeni</i> (Böse) .....	R	<i>Holotricharina</i> <i>sparsa</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	VR	<i>Hustedia</i> <i>connorsi</i> Cooper and Grant .....	C
<i>Lepidospirifer</i> sp. ....	VR	<i>Hustedia</i> sp. ....	C
<i>Limbella</i> <i>limbata</i> Cooper and Grant .....	VR	<i>Kutorginella</i> <i>umbonata</i> (Muir-Wood and Cooper) .....	VR
<i>Meekella</i> <i>hessensis</i> R.E. King .....	R	<i>Lepidocrania</i> <i>sublamellosa</i> Cooper and Grant .....	R
<i>Neophricadothyris</i> sp. ....	R	<i>Leurosina</i> <i>lata</i> Cooper and Grant .....	R
<i>Paranorella</i> sp. 6 .....	VR	<i>Liosotella</i> <i>costata</i> Cooper and Grant .....	VR
<i>Peniculauris</i> sp. ....	VR	<i>Liosotella</i> <i>rotunda</i> Cooper and Grant .....	C
<i>Rallacosta?</i> sp. ....	VR	<i>Meekella</i> <i>calathica</i> Cooper and Grant .....	A
<i>Rhamnaria</i> <i>grandis</i> Cooper and Grant .....	R	<i>Meekella</i> <i>skenoides</i> Girty .....	C
<i>Rhipidomella</i> <i>hessensis</i> R.E. King .....	VR	<i>Megousia</i> <i>mucronata</i> Cooper and Grant .....	A
<i>Sceletonia</i> <i>crassa</i> Cooper and Grant .....	R	<i>Metriolepis</i> <i>pineae</i> Cooper and Grant .....	A
<i>Sceletonia</i> sp. ....	VR	<i>Metriolepis</i> sp. ....	VR
<i>Stenosisma</i> sp. ....	VR	<i>Metriolepis</i> <i>ziczac</i> Cooper and Grant .....	VR
<i>Torynechus</i> <i>alectorius</i> Cooper and Grant .....	R	<i>Neophricadothyris</i> <i>cordata</i> Cooper and Grant .....	C
LOCALITY N732i : Road Canyon Formation			
<i>Cyclacantharia</i> <i>transitoria</i> Cooper and Grant .....	VR	<i>Neospirifer</i> <i>bakeri bakeri</i> R.E. King .....	C
<i>Echinauris</i> sp. ....	R	<i>Notothyris</i> <i>gillilandensis</i> Cooper and Grant .....	R
<i>Enteleles</i> <i>exiguus</i> Cooper and Grant .....	R	<i>Notothyris</i> <i>planiplicata</i> Cooper and Grant .....	R
<i>Enteleles</i> sp. ....	R	<i>Paranorella</i> sp. 5 .....	R
<i>Hustedia</i> <i>connorsi</i> Cooper and Grant .....	C	<i>Paraspiriferina</i> <i>pulchra</i> Cooper and Grant .....	C
<i>Kutorginella</i> <i>umbonata</i> (Muir-Wood and Cooper) .....	VR	<i>Paucispinifera</i> <i>parasulcata</i> Cooper and Grant .....	C
<i>Meekella</i> <i>skenoides</i> Girty .....	VR	<i>Paucispinifera</i> sp. ....	VR
<i>Megousia</i> <i>mucronata</i> Cooper and Grant .....	R	<i>Paucispinifera</i> <i>sulcata</i> Cooper and Grant .....	C
<i>Metriolepis</i> <i>ziczac</i> Cooper and Grant .....	VR	<i>Peniculauris</i> sp. ....	VR
<i>Neophricadothyris</i> sp. ....	VR	<i>Petasmatherus</i> <i>pumilus</i> Cooper and Grant .....	C
<i>Neospirifer</i> <i>formulosus</i> Cooper and Grant .....	VR	<i>Petrocrania</i> sp. ....	VR
<i>Paraspiriferina</i> <i>pulchra</i> Cooper and Grant .....	VR	<i>Phrenophoria</i> sp. ....	VR
<i>Paucispinifera</i> sp. ....	VR	<i>Pontisia</i> <i>truncata</i> Cooper and Grant .....	R
<i>Rhamnaria</i> <i>tenuispinosa</i> Cooper and Grant .....	VR	<i>Ptygmactrum</i> sp. ....	VR
<i>Rhynchopora</i> <i>hebetata</i> Cooper and Grant .....	VR	<i>Rhamnaria</i> <i>tenuispinosa</i> Cooper and Grant .....	C
<i>Tropidlasma</i> <i>corniculum</i> Cooper and Grant .....	VR	<i>Rhamnaria</i> <i>vinnula</i> Cooper and Grant .....	R
LOCALITY N732j : Road Canyon Formation			
<i>Acosarina</i> <i>mesoplatys</i> (R.E. King) .....	VR	<i>Rhynchopora</i> <i>hebetata</i> Cooper and Grant .....	R
<i>Allorhynchus</i> <i>concentricum</i> Cooper and Grant .....	VR	<i>Rhytisia</i> <i>rugosa</i> Cooper and Grant .....	VR
<i>Anteridocus</i> <i>triangulatus</i> Cooper and Grant .....	VR	<i>Spiriferella</i> sp. ....	R
<i>Cenorhynchia</i> <i>transversa</i> Cooper and Grant .....	R	<i>Spiriferellina</i> <i>tricolor</i> Cooper and Grant .....	VR
<i>Chondronia</i> sp. ....	R	<i>Spiriferellina</i> <i>vescula</i> Cooper and Grant .....	C
<i>Chonetinella</i> <i>gerontica</i> Cooper and Grant .....	C	<i>Stenosisma</i> sp. ....	VR
<i>Collemataria</i> <i>batilliformis</i> Cooper and Grant .....	VR	<i>Tautosia</i> <i>angulata</i> Cooper and Grant .....	VR
<i>Collumatus</i> <i>solitarius</i> Cooper and Grant .....	C	<i>Texarina</i> <i>parallela</i> Cooper and Grant .....	VR
<i>Composita</i> cf. <i>enormis</i> Cooper and Grant .....	R	<i>Texarina</i> <i>wordensis</i> (R.E. King) .....	VR
<i>Composita</i> <i>pilula</i> Cooper and Grant .....	C	<i>Thedusia</i> <i>mesocostata</i> Cooper and Grant .....	C
<i>Composita</i> sp. ....	C	<i>Tropidlasma</i> <i>corniculum</i> Cooper and Grant .....	A
<i>Cooperina</i> <i>subcuneata</i> Cooper and Grant .....	VR	<i>Undulella</i> <i>matutina</i> Cooper and Grant .....	R
<i>Coscinophora</i> <i>magnifica</i> Cooper and Grant .....	VR	<i>Waagenoconcha</i> <i>convexa</i> Cooper and Grant .....	VR
<i>Costispinifera</i> <i>rugatula</i> (Girty) .....	VR	<i>Xenosteges</i> <i>trivialis</i> Cooper and Grant .....	C
<i>Cyclacantharia</i> <i>transitoria</i> Cooper and Grant .....	C	<i>Yakovlevia</i> <i>anterospinosa</i> Cooper and Grant .....	VR
<i>Derbyia</i> <i>cinninata</i> Cooper and Grant .....	VR	<i>Yakovlevia</i> <i>sulcata</i> Cooper and Grant .....	R
<i>Derbyia</i> <i>complicata</i> Cooper and Grant .....	R	LOCALITY N732m : Road Canyon Formation	
<i>Derbyia</i> <i>laqueata</i> Cooper and Grant .....	R	<i>Cyclacantharia</i> <i>paucispinosa</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	R	<i>Edriosteges</i> <i>multispinosus</i> Muir-Wood and Cooper .....	R
<i>Dielasma</i> sp. ....	R	<i>Meekella</i> <i>calathica</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>transversus</i> Cooper and Grant .....	R	LOCALITY N732q : Capitan Formation	
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>vulgaris</i> Cooper and Grant .....	A	<i>Anteridocus</i> <i>swallowianus</i> (Shumard) .....	R
<i>Echinauris</i> <i>lappacea</i> Cooper and Grant .....	A	<i>Cartorhium</i> <i>mexicanum</i> (Shumard) .....	VR
<i>Echinosteges</i> sp. ....	VR	<i>Composita</i> <i>affinis</i> Girty .....	VR
		<i>Dielasma</i> <i>prolongatum</i> Girty .....	VR
		<i>Liosotella</i> <i>popei</i> (Shumard) .....	VR
		<i>Paraspiriferina</i> <i>billingsi</i> (Shumard) .....	VR

	Rarity code		Rarity code
LOCALITY N732q - Continued		<i>Anteridocus swallowianus</i> (Shumard).....	R
<i>Pseudoleptodus guadalupensis</i> (Stehli).....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard).....	C
<i>Reticulariina</i> sp. ....	VR	<i>Composita emarginata</i> Girty.....	R
<i>Stenosisma trabeatum</i> Cooper and Grant.....	VR	<i>Craspedona newelli</i> Cooper and Grant.....	R
<i>Tautosia shumardiana</i> (Girty).....	VR	<i>Crenispirifer jubatus</i> Cooper and Grant.....	R
LOCALITY N732r : Road Canyon Formation		<i>Deltarina magnicostata</i> Cooper and Grant.....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Derbyia</i> sp. ....	C
LOCALITY N732s : Word Formation		<i>Dielasma sulcatum</i> Girty.....	R
<i>Allorhynchus triangulatum</i> Cooper and Grant.....	VR	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>intrepidus</i> Cooper and Grant.....	R
<i>Cactosteges anomalus</i> Cooper and Grant.....	VR	<i>Elivina?</i> <i>annectans</i> Cooper and Grant.....	C
<i>Collemataria elongata</i> Cooper and Grant.....	R	<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant.....	R
<i>Compressoproductus rarus</i> Cooper and Grant.....	VR	<i>Heteralosia magnispina</i> Cooper and Grant.....	VR
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud.....	VR	<i>Heterelasma shumardianum</i> Girty.....	VR
<i>Costispinifera rugatula</i> (Girty).....	C	<i>Hustedia demissa</i> Cooper and Grant.....	R
<i>Cyclacantharia kingorum</i> Cooper and Grant.....	R	<i>Hustedia rupinata</i> Cooper and Grant.....	A
<i>Derbyia filosa</i> Cooper and Grant.....	VR	<i>Metriolepis nabis</i> Cooper and Grant.....	VR
<i>Derbyia</i> sp. ....	VR	<i>Metriolepis pedicosa</i> Cooper and Grant.....	VR
<i>Dielasma</i> sp. ....	VR	<i>Micraphelia scitula</i> Cooper and Grant.....	C
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>tenuis</i> Cooper and Grant.....	VR	<i>Micraphelia subalata</i> Cooper and Grant.....	C
<i>Dyoros</i> ( <i>Lissosia</i> ) <i>concavus</i> Cooper and Grant.....	R	<i>Paraspiriferina sapinea</i> Cooper and Grant.....	R
<i>Echinauris</i> sp. ....	R	<i>Paucispinifera spinosa</i> Cooper and Grant.....	R
<i>Echinosteges tuberculatus</i> (R.E. King).....	VR	<i>Paucispinifera suspecta</i> Cooper and Grant.....	C
<i>Enteleles</i> sp. ....	VR	<i>Phrenophoria perplexa</i> Cooper and Grant.....	VR
<i>Heteralosia hystricula</i> (Girty).....	R	<i>Plectelasma guadalupense</i> (Girty).....	R
<i>Hustedia pugilla nasiterna</i> Cooper and Grant.....	VR	<i>Pseudoleptodus guadalupensis</i> (Stehli).....	VR
<i>Hustedia</i> sp. ....	R	<i>Ptilotorhynchus delicatum</i> Cooper and Grant.....	VR
<i>Liosotella wordensis</i> (R.E. King).....	VR	<i>Rallacosta imporcata</i> Cooper and Grant.....	R
<i>Meekella skenoides</i> Girty.....	R	<i>Reticulariina echinata</i> Cooper and Grant.....	VR
<i>Megousia mucronata</i> Cooper and Grant.....	R	<i>Reticulariina</i> sp. ....	VR
<i>Paraspiriferina laqueata</i> Cooper and Grant.....	VR	<i>Rhamnaria shumardi</i> Cooper and Grant.....	VR
<i>Paucispinifera intermedia</i> Cooper and Grant.....	VR	<i>Sarganostega transversalis</i> Cooper and Grant.....	R
<i>Paucispinifera</i> sp. ....	VR	<i>Scapharina levis</i> Cooper and Grant.....	R
<i>Rhamnaria kingorum delicata</i> Muir-Wood and Cooper.....	R	<i>Sestropoma cribriferum</i> Cooper and Grant.....	R
<i>Spiriferellina hilli</i> (Girty).....	VR	<i>Spiriferella sulcifer</i> (Shumard).....	R
<i>Xenosteges quadratus</i> Cooper and Grant.....	VR	<i>Tautosia elegans</i> (Girty).....	VR
LOCALITY N732t : Road Canyon Formation		<i>Thamnosia capitaneensis</i> (Girty).....	R
<i>Coscinophora magnifica</i> Cooper and Grant.....	VR	<i>Thedusia trigonalis</i> (Girty).....	R
<i>Paucispinifera</i> sp. ....	VR	<i>Thedusia ventricosa</i> Cooper and Grant.....	C
LOCALITY N732u : Cathedral Mountain Formation		<i>Tropidelasma gregarium</i> (Girty).....	VR
<i>Acritosia</i> sp. ....	VR	LOCALITY N733a : Road Canyon Formation	
<i>Anemonaria sublaevis</i> (R.E. King).....	VR	<i>Coscinophora magnifica</i> Cooper and Grant.....	VR
<i>Chonosteges</i> sp. ....	VR	LOCALITY N733b : Road Canyon Formation	
<i>Collemataria gregaria</i> Cooper and Grant.....	VR	<i>Megousia</i> sp. ....	VR
<i>Derbyia</i> sp. ....	VR	LOCALITY N733h : Skinner Ranch Formation, Decie	
<i>Echinauris</i> sp. ....	VR	Ranch Member	
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper.....	VR	<i>Antronaria titania</i> Cooper and Grant.....	VR
<i>Eolyttonia pocillata</i> Cooper and Grant.....	VR	<i>Meekella caperata</i> Cooper and Grant.....	VR
<i>Hercosia uddeni</i> (Böse).....	VR	<i>Scacchinella titan</i> Cooper and Grant.....	R
<i>Lepidospirifer demissus</i> Cooper and Grant.....	VR	LOCALITY N733j : Skinner Ranch Formation, Sullivan	
<i>Meekella calathica</i> Cooper and Grant.....	R	Peak Member	
<i>Neophricadothyris</i> sp. ....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant.....	A
<i>Neospirifer mansuetus</i> Cooper and Grant.....	VR	<i>Acritosia peculiaris</i> Cooper and Grant.....	C
<i>Peniculauris subcostata</i> (R.E. King).....	R	<i>Anteridocus paucicostatus</i> Cooper and Grant.....	C
<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	VR	<i>Chondronia</i> sp. ....	R
<i>Rugatia paraindica</i> (McKee).....	R	<i>Chonosteges limbatus</i> Cooper and Grant.....	VR
LOCALITY N732w : Road Canyon Formation		<i>Composita</i> sp. ....	VR
<i>Coscinophora magnifica</i> Cooper and Grant.....	VR	<i>Compressoproductus</i> sp. ....	VR
LOCALITY N733 : Bell Canyon Formation, Pinery		<i>Coscinophora monilifera</i> Cooper and Grant.....	A
Member		<i>Derbyia nasuta</i> Girty.....	R
<i>Altiplecus? deltosus</i> Cooper and Grant.....	R	<i>Dielasma</i> sp. ....	VR
<i>Altiplecus trapezoidalis</i> Cooper and Grant.....	R	<i>Diplanus rarus</i> Cooper and Grant.....	VR
		<i>Diplanus</i> sp. ....	VR
		<i>Enteleles</i> sp. ....	R

	Rarity code		Rarity code
LOCALITY N733j - Continued		<i>Grandaurispina</i> sp. ....	VR
<i>Geyerella hessi</i> Cooper and Grant .....	A	<i>Heteralosia hystricula</i> (Girty) .....	R
<i>Glyptosteges angustus</i> (R.E. King) .....	VR	<i>Hustedia pugilla nasiterna</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	R	<i>Hustedia</i> sp. ....	C
<i>Limbella limbata</i> Cooper and Grant .....	VR	<i>Liosotella wordensis</i> (R.E. King) .....	C
<i>Meekella hessensis</i> R.E. King .....	C	<i>Meekella skenoides</i> Girty .....	A
<i>Oncosarina</i> sp. ....	C	<i>Megousia mucronata</i> Cooper and Grant .....	C
<i>Reticulariina</i> sp. ....	VR	<i>Neophricadothyris conara</i> Cooper and Grant .....	R
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Notothyris venusta</i> Cooper and Grant .....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Paraspiriferina laqueata</i> Cooper and Grant .....	R
<i>Spyridiophora reticulata</i> (R.E. King) .....	VR	<i>Paraspiriferina</i> sp. ....	VR
<i>Stenosisma</i> sp. ....	VR	<i>Paucispinifera intermedia</i> Cooper and Grant .....	C
<i>Tropidelasma robertsi</i> Cooper and Grant .....	R	<i>Reticulariina cerina</i> Cooper and Grant .....	VR
LOCALITY N733-l : Skinner Ranch Formation, Dugout Mtn Member		<i>Rhamnaria kingorum delicata</i> Muir-Wood and Cooper .....	R
<i>Acritosia peculiaris</i> Cooper and Grant .....	VR	<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR
<i>Chondronia nungula</i> Cooper and Grant .....	VR	<i>Spiriferella</i> sp. ....	VR
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Spiriferellina hilli</i> (Girty) .....	R
<i>Compressoproductus parvus</i> Cooper and Grant .....	VR	<i>Thamnusia phragmophora</i> Cooper and Grant .....	VR
<i>Echinauris</i> sp. ....	VR	<i>Thedusia procera</i> Cooper and Grant .....	VR
<i>Glyptosteges intricatus</i> Cooper and Grant .....	VR	<i>Tropidelasma anthicum</i> Cooper and Grant .....	VR
<i>Goniarina</i> sp. ....	VR	<i>Waagenoconcha magnifica</i> Cooper and Grant .....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	VR
<i>Torynechus alectorius</i> Cooper and Grant .....	VR	<i>Xenosteges quadratus</i> Cooper and Grant .....	R
LOCALITY N733m : Cathedral Mountain Formation		LOCALITY N733r : Skinner Ranch Formation	
<i>Acosarina mesoplatys</i> (R.E. King) .....	VR	<i>Derbyia</i> sp. ....	VR
<i>Choanodus irregularis</i> Cooper and Grant .....	VR	<i>Enteleles stehlii</i> Cooper and Grant .....	VR
<i>Chonosteges variabilis</i> Cooper and Grant .....	R	<i>Hustedia hessensis</i> R.E. King .....	R
<i>Composita</i> sp. ....	VR	<i>Kochiproductus</i> sp. ....	VR
<i>Derbyia laqueata</i> Cooper and Grant .....	R	<i>Kozlowskia alata</i> Cooper and Grant .....	R
<i>Echinauris irregularis</i> Cooper and Grant .....	R	<i>Kozlowskia</i> sp. ....	VR
<i>Grandaurispina</i> sp. ....	VR	<i>Linoproductus angustus</i> R.E. King .....	VR
<i>Hercosia uddeni</i> (Böse) .....	C	<i>Meekella hessensis</i> R.E. King .....	R
<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	R	<i>Teguliferina conida</i> (Stehli) .....	R
<i>Lepidospirifer demissus</i> Cooper and Grant .....	VR	LOCALITY N733z : Ross Mine Formation	
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Yakovlevia sulcata</i> Cooper and Grant .....	VR
<i>Megousia umbonata</i> Cooper and Grant .....	VR	LOCALITY N734 : Bell Canyon Formation, Pinery Member	
<i>Metriolepis tegulata</i> Cooper and Grant .....	VR	<i>Edriosteges</i> sp. ....	VR
<i>Nudauris linospina</i> Cooper and Grant .....	VR	LOCALITY N734j : Road Canyon Formation	
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	R	<i>Acosarina</i> sp. ....	VR
<i>Rugatia paraindica</i> (McKee) .....	R	<i>Composita</i> sp. ....	VR
LOCALITY N733n : Road Canyon Formation		<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR
<i>Coscinophora magnifica</i> Cooper and Grant .....	VR	<i>Hustedia</i> sp. ....	VR
LOCALITY N733q : Word Formation, China Tank Member		<i>Meekella calathica</i> Cooper and Grant .....	VR
<i>Allorhynchus triangulatum</i> Cooper and Grant .....	VR	<i>Neophricadothyris</i> sp. ....	VR
<i>Cactosteges anomalus</i> Cooper and Grant .....	VR	LOCALITY N735 : Bell Canyon Formation, Rader Member	
<i>Cartorhium chelomatium</i> Cooper and Grant .....	R	<i>Bryorhynchus gratiosum</i> (Girty) .....	C
<i>Collemataria elongata</i> Cooper and Grant .....	C	LOCALITY N735a : Road Canyon Formation	
<i>Composita parasulcata</i> Cooper and Grant .....	R	<i>Derbyia</i> sp. ....	VR
<i>Compressoproductus rarus</i> Cooper and Grant .....	VR	<i>Dyoros (Dyoros) transversus</i> Cooper and Grant .....	VR
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Costispinifera rugatula</i> (Girty) .....	R	<i>Horridonia texana</i> R.E. King .....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	C	<i>Hustedia cuneata</i> Cooper and Grant .....	VR
<i>Derbyia filosa</i> Cooper and Grant .....	R	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Derbyia pannucia</i> Cooper and Grant .....	C	<i>Neospirifer bakeri bakeri</i> R.E. King .....	VR
<i>Dielasma compactum</i> Cooper and Grant .....	VR	<i>Ptygmactrum mordicum</i> Cooper and Grant .....	VR
<i>Dielasma zebratum</i> Cooper and Grant .....	R	<i>Rugatia mckeei</i> Cooper and Grant .....	VR
<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	C	<i>Thedusia mesocostata</i> Cooper and Grant .....	R
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	A	<i>Waagenoconcha platys</i> Cooper and Grant .....	VR
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR		
<i>Enteleles wordensis</i> R.E. King .....	C		



	Rarity code		Rarity code
LOCALITY N735b : Cathedral Mountain Formation			
<i>Acosarina mesoplatys</i> (R.E. King) .....	R	<i>Dyoros (Dyoros) extensus</i> Cooper and Grant .....	A
<i>Anteridocus gongylus</i> Cooper and Grant .....	R	<i>Dyoros (Lissosia) concavus</i> Cooper and Grant .....	VR
<i>Cartorhium latum</i> (R.E. King) .....	VR	<i>Dyoros (Tetragonetes) giganteus</i> Cooper and Grant .....	VR
<i>Chaeniorhynchus inauris</i> Cooper and Grant .....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	VR
<i>Chondronia bella</i> Cooper and Grant .....	R	<i>Echinosteges tuberculatus</i> (R.E. King) .....	C
<i>Chonosteges variabilis</i> Cooper and Grant .....	VR	<i>Ectoposia grandis</i> Cooper and Grant .....	VR
<i>Cleiothyridina</i> sp. ....	VR	<i>Glossothyropsis rectangulata</i> Cooper and Grant .....	VR
<i>Collemataria gregaria</i> Cooper and Grant .....	R	<i>Grandaurispina kingorum</i> Muir-Wood and Cooper .....	C
<i>Composita imbricata</i> Cooper and Grant .....	R	<i>Heteralosia hystricula</i> (Girty) .....	C
<i>Derbyia laqueata</i> Cooper and Grant .....	R	<i>Heterelasma concavum</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Hustedia pugilla pugilla</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	VR	<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	VR
<i>Dyoros (Lissosia) vagabundus</i> Cooper and Grant .....	C	<i>Liosotella wordensis</i> (R.E. King) .....	VR
<i>Echinauris irregularis</i> Cooper and Grant .....	C	<i>Neophricadothyris</i> sp. ....	VR
<i>Edriosteges multispinosus</i> Muir-Wood and Cooper .....	VR	<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	C
<i>Eolyttonia circularis</i> Cooper and Grant .....	VR	<i>Petasmatherus opulus</i> Cooper and Grant .....	VR
<i>Eolyttonia pocillata</i> Cooper and Grant .....	VR	<i>Pseudodielasma</i> sp. ....	A
<i>Grandaurispina? vaga</i> Cooper and Grant .....	VR	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C
<i>Hercosia uddeni</i> (Böse) .....	C	<i>Rhynchopora palumbula</i> Cooper and Grant .....	VR
<i>Heterelasma gibbosum</i> Cooper and Grant .....	VR	<i>Spiriferella gravis</i> Cooper and Grant .....	VR
<i>Hustedia spicata</i> Cooper and Grant .....	A	<i>Spiriferellina hilli</i> (Girty) .....	C
<i>Institella leonardensis</i> (R.E. King) .....	C	<i>Theodusia procera</i> Cooper and Grant .....	R
<i>Lepidospirifer demissus</i> Cooper and Grant .....	R	<i>Undulella undulata</i> Cooper and Grant .....	VR
<i>Loxophragmus ellipticus</i> Cooper and Grant .....	R	<i>Wellerella girtyi girtyi</i> Cooper and Grant .....	R
<i>Martinia miranda</i> Cooper and Grant .....	C	<i>Xenosteges quadratus</i> Cooper and Grant .....	VR
<i>Meekella calathica</i> Cooper and Grant .....	R	<i>Yakovlevia hessorum</i> Cooper and Grant .....	R
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	LOCALITY N735f : Skinner Ranch Formation, Sullivan	
<i>Metriolepis tegulata</i> Cooper and Grant .....	R	Peak Member	
<i>Neophricadothyris</i> sp. ....	VR	<i>Spyridiophora reticulata</i> (R.E. King) .....	VR
<i>Neospirifer mansuetus</i> Cooper and Grant .....	R	LOCALITY N735g : Cathedral Mountain Formation	
<i>Niviconia globosa</i> (R.E. King) .....	R	<i>Derbyia cincinnata</i> Cooper and Grant .....	VR
<i>Nudauris linospina</i> Cooper and Grant .....	R	<i>Peniculauris subcostata</i> (R.E. King) .....	VR
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Rugatia paraindica</i> (McKee) .....	VR
<i>Petasmaia expansa</i> Cooper and Grant .....	R	LOCALITY N735i : Cathedral Mountain Formation	
<i>Phrenophoria</i> sp. ....	VR	<i>Rugatia paraindica</i> (McKee) .....	VR
<i>Pontisia stehlii stehlii</i> Cooper and Grant .....	VR	LOCALITY N735j : Capitan Formation	
<i>Reticulariina craticula</i> Cooper and Grant .....	VR	<i>Anteridocus swallowianus</i> (Shumard) .....	R
<i>Reticulariina</i> sp. ....	VR	LOCALITY N735w : Road Canyon Formation	
<i>Rhamnaria tenuispinosa</i> Cooper and Grant .....	R	<i>Hercosestria cribrosa</i> Cooper and Grant .....	VR
<i>Rhipidomella hispidula</i> Cooper and Grant .....	VR	<i>Meekella calathica</i> Cooper and Grant .....	VR
<i>Rhynchopora hebetata</i> Cooper and Grant .....	VR	LOCALITY N736 : Bell Canyon Formation, Pinery	
<i>Rugatia paraindica</i> (McKee) .....	VR	Member	
<i>Stenosisma calvatum</i> Cooper and Grant .....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant .....	R
<i>Stenosisma doricranum</i> Cooper and Grant .....	R	<i>Altiplecus trapezoidalis</i> Cooper and Grant .....	R
<i>Stenosisma</i> sp. ....	VR	<i>Bryorhynchus gratosum</i> (Girty) .....	C
<i>Stenosisma triquetrum</i> Cooper and Grant .....	R	<i>Composita emarginata</i> Girty .....	VR
<i>Tautosia fastigiata</i> Cooper and Grant .....	VR	<i>Composita</i> sp. ....	R
<i>Texarina wordensis</i> (R.E. King) .....	VR	<i>Crenispirifer jubatus</i> Cooper and Grant .....	R
<i>Torynechus caelatus</i> Cooper and Grant .....	R	<i>Derbyia texta</i> Cooper and Grant .....	C
<i>Trophisina fenaria</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Xenosteges adherens</i> Muir-Wood and Cooper .....	R	<i>Dielasma subcirculare</i> Cooper and Grant .....	VR
LOCALITY N735c : Word Formation, Willis Ranch			
Member			
<i>Cactosteges anomalus</i> Cooper and Grant .....	R	<i>Dielasma sulcatum</i> Girty .....	VR
<i>Cancrinella subquadrata</i> Cooper and Grant .....	VR	<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	R
<i>Cenorhynchia fracidia</i> Cooper and Grant .....	R	<i>Echinosteges guadalupensis</i> (Shumard) .....	VR
<i>Collemataria elongata</i> Cooper and Grant .....	C	<i>Elivina? annectans</i> Cooper and Grant .....	C
<i>Composita enormis</i> Cooper and Grant .....	R	<i>Fascicosta longaeva</i> (Girty) .....	VR
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR	<i>Hustedia rupinata</i> Cooper and Grant .....	A
<i>Derbyia</i> sp. ....	R	<i>Hustedia</i> sp. ....	VR
<i>Dielasma</i> sp. ....	VR	<i>Lepidocrania</i> sp. ....	VR
<i>Dielasma zebratum</i> Cooper and Grant .....	R	<i>Madarosia anterolamellata</i> Cooper and Grant .....	R
		<i>Metriolepis nabis</i> Cooper and Grant .....	VR

	Rarity code		Rarity code
LOCALITY N736 - Continued			
<i>Metriolepis pedicosa</i> Cooper and Grant.....	VR	<i>Liosotella</i> cf. <i>costata</i> Cooper and Grant.....	VR
<i>Metriolepis</i> sp. ....	VR	<i>Liosotella rotunda</i> Cooper and Grant.....	R
<i>Micraphelia scitula</i> Cooper and Grant.....	VR	<i>Meekella calathica</i> Cooper and Grant.....	R
<i>Paraspiriferina sapinea</i> Cooper and Grant.....	C	<i>Megousia mucronata</i> Cooper and Grant.....	R
<i>Paucispinifera suspecta</i> Cooper and Grant.....	R	<i>Metriolepis</i> sp. ....	R
<i>Petrocrania exasperata</i> Cooper and Grant.....	VR	<i>Metriolepis ziczac</i> Cooper and Grant.....	VR
<i>Plectelasma guadalupense</i> (Girty).....	R	<i>Neophricadothyris cordata</i> Cooper and Grant.....	R
<i>Pseudoleptodus guadalupensis</i> (Stehli).....	R	<i>Neospirifer bakeri bakeri</i> R.E. King.....	VR
<i>Rallacosta imporcata</i> Cooper and Grant.....	VR	<i>Notothyris gillilandensis</i> Cooper and Grant.....	R
<i>Reticulariina echinata</i> Cooper and Grant.....	VR	<i>Notothyris planiplicata</i> Cooper and Grant.....	VR
<i>Reticulariina</i> sp. ....	R	<i>Paraspiriferina pulchra</i> Cooper and Grant.....	R
<i>Reticulariina welleri</i> (Girty).....	VR	<i>Paucispinifera parasulcata</i> Cooper and Grant.....	VR
<i>Sarganostega transversalis</i> Cooper and Grant.....	VR	<i>Paucispinifera</i> sp. ....	VR
<i>Scapharina rugosa</i> Cooper and Grant.....	C	<i>Paucispinifera sulcata</i> Cooper and Grant.....	R
<i>Sestropoma cribriferum</i> Cooper and Grant.....	R	<i>Petasmaia</i> sp. 1.....	VR
<i>Spiriferella sulcifer</i> (Shumard).....	VR	<i>Petasmatherus nitidus</i> Cooper and Grant.....	VR
<i>Thamnosia capitanensis</i> (Girty).....	VR	<i>Petasmatherus pumilus</i> Cooper and Grant.....	R
<i>Thedusia angustata</i> Cooper and Grant.....	R	<i>Rhamnaria tenuispinosa</i> Cooper and Grant.....	R
<i>Thedusia trigonalis</i> (Girty).....	R	<i>Rhynchopora hebetata</i> Cooper and Grant.....	R
<i>Tropidelasma gregarium</i> (Girty).....	VR	<i>Rhytisia rugosa</i> Cooper and Grant.....	VR
LOCALITY N736a : Bell Canyon Formation, Pinery Member		<i>Spiriferella</i> sp. ....	VR
<i>Altiplexus? deltosus</i> Cooper and Grant.....	VR	<i>Spiriferellina</i> sp. ....	VR
<i>Composita emarginata</i> Girty.....	VR	<i>Spiriferellina vescula</i> Cooper and Grant.....	R
<i>Craspedona newelli</i> Cooper and Grant.....	VR	<i>Texarina parallela</i> Cooper and Grant.....	VR
<i>Crenispirifer jubatus</i> Cooper and Grant.....	VR	<i>Thedusia mesocostata</i> Cooper and Grant.....	R
<i>Derbyia</i> sp. ....	VR	<i>Tropidelasma corniculum</i> Cooper and Grant.....	C
<i>Elivina? annectans</i> Cooper and Grant.....	VR	<i>Undulella matutina</i> Cooper and Grant.....	VR
<i>Hustedia rupinata</i> Cooper and Grant.....	R	<i>Xenosteges trivialis</i> Cooper and Grant.....	R
<i>Metriolepis pedicosa</i> Cooper and Grant.....	VR	<i>Yakovlevia sulcata</i> Cooper and Grant.....	VR
<i>Paraspiriferina sapinea</i> Cooper and Grant.....	VR	LOCALITY N737a : Capitan Formation	
<i>Plectelasma guadalupense</i> (Girty).....	VR	<i>Aneuthelasma amygdalinum</i> Cooper and Grant.....	VR
<i>Reticulariina laxa</i> (Girty).....	R	<i>Anomaloria anomala</i> Cooper and Grant.....	R
<i>Thedusia trigonalis</i> (Girty).....	VR	<i>Astegospia subquadrata</i> (Girty).....	A
<i>Thedusia ventricosa</i> Cooper and Grant.....	VR	<i>Collemataria spatulata</i> Cooper and Grant.....	R
LOCALITY N736t : Cathedral Mountain Formation		<i>Composita affinis</i> Girty.....	VR
<i>Cenorhynchia</i> sp. ....	VR	<i>Composita emarginata</i> Girty.....	VR
<i>Echinauris</i> sp. ....	VR	<i>Compressoproductus pinniformis</i> (Girty).....	VR
<i>Entelestes</i> sp. ....	VR	<i>Crurithyris guadalupensis</i> (Girty).....	VR
<i>Institella leonardensis</i> (R.E. King).....	VR	<i>Elivina compacta</i> (Girty).....	R
LOCALITY N736x : Road Canyon Formation		<i>Fascicosta longaeva</i> (Girty).....	VR
<i>Chondronia ovalis</i> Cooper and Grant.....	C	<i>Heterelasma shumardianum</i> Girty.....	VR
<i>Collumatus solitarius</i> Cooper and Grant.....	C	<i>Hustedia opsia</i> Cooper and Grant.....	VR
<i>Composita</i> cf. <i>enormis</i> Cooper and Grant.....	VR	<i>Martinia rhomboidalis</i> Girty.....	R
<i>Composita pilula</i> Cooper and Grant.....	R	<i>Ombonia guadalupensis</i> (Girty).....	C
<i>Cooperina subcuneata</i> Cooper and Grant.....	VR	<i>Paraspiriferina billingsi</i> (Shumard).....	VR
<i>Cyclacantharia transitoria</i> Cooper and Grant.....	R	<i>Paucispinifera latidorsata</i> (Girty).....	R
<i>Derbyia cincinnata</i> Cooper and Grant.....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Derbyia complicata</i> Cooper and Grant.....	R	<i>Sarganostega pressa</i> Cooper and Grant.....	VR
<i>Derbyia laqueata</i> Cooper and Grant.....	R	<i>Stenoscisma trabeatum</i> Cooper and Grant.....	VR
<i>Derbyia</i> sp. ....	VR	<i>Strigirhynchia indentata</i> (Shumard).....	VR
<i>Dielasma</i> sp. ....	VR	<i>Tautosia elegans</i> (Girty).....	VR
<i>Dyoros (Dyoros) vulgaris</i> Cooper and Grant.....	R	<i>Tautosia shumardiana</i> (Girty).....	R
<i>Echinauris lappacea</i> Cooper and Grant.....	C	<i>Thamnosia capitanensis</i> (Girty).....	VR
<i>Entelestes exiguus</i> Cooper and Grant.....	C	<i>Xenosteges umbonatus</i> Cooper and Grant.....	VR
<i>Entelestes</i> sp. ....	C	LOCALITY N737b : Word Formation	
<i>Heterelasma</i> sp. ....	VR	<i>Composita</i> sp. ....	VR
<i>Holotricharina sparsa</i> Cooper and Grant.....	VR	<i>Crurithyris tholiaphor</i> Cooper and Grant.....	VR
<i>Hustedia connorsii</i> Cooper and Grant.....	C	<i>Derbyia</i> sp. ....	R
<i>Kutorginella umbonata</i> (Muir-Wood and Cooper).....	VR	<i>Dyoros (Dyoros) convexus</i> Cooper and Grant.....	VR
<i>Lepidocrania tardispinosa</i> Cooper and Grant.....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper.....	VR
<i>Leurosina lata</i> Cooper and Grant.....	VR	<i>Echinosteges</i> sp. ....	VR
		<i>Glossothyropsis carinata</i> (Girty).....	VR
		<i>Glossothyropsis robusta</i> (Girty).....	VR
		<i>Heteralosia</i> sp. ....	VR

	Rarity code		Rarity code
LOCALITY N737b - Continued		<i>Liosotella wordensis</i> (R.E. King) .....	R
<i>Hustedia</i> sp. ....	C	<i>Neophricadothyris</i> sp. ....	VR
<i>Lepidocrania sublamellosa</i> Cooper and Grant .....	VR	<i>Paraspiriferina</i> sp. ....	VR
<i>Leurosina lata</i> Cooper and Grant .....	VR	<i>Paucispinifera quadrata</i> Cooper and Grant .....	R
<i>Liosotella irregularis</i> Cooper and Grant .....	VR	<i>Pseudoleptodus grandis</i> Cooper and Grant .....	VR
<i>Liosotella wordensis</i> (R.E. King) .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Meekella skenoides</i> Girty .....	R	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	R
<i>Metriolepis</i> sp. ....	VR	<i>Spiriferella</i> sp. ....	R
<i>Paraspiriferina</i> sp. ....	VR	<i>Stenosisma</i> sp. ....	VR
<i>Paucispinifera auriculata</i> Muir-Wood and Cooper .....	VR	LOCALITY N737y : Road Canyon Formation	
<i>Pseudoleptodus</i> ? sp. 8 .....	VR	<i>Collumatus solitarius</i> Cooper and Grant .....	VR
<i>Reticulariina cerina</i> Cooper and Grant .....	VR	<i>Echinauris</i> sp. ....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	VR	<i>Enteleles</i> sp. ....	VR
<i>Spiriferella</i> sp. ....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR	<i>Theodusia</i> sp. ....	VR
LOCALITY N737f : Cathedral Mountain Formation		LOCALITY N738 : Bell Canyon Formation, Lamar	
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	Member	
LOCALITY N737j : Cathedral Mountain Formation		<i>Allorhynchus venustulum</i> Cooper and Grant .....	R
<i>Neospirifer</i> sp. ....	VR	<i>Aneuthelasma amygdalinum</i> Cooper and Grant .....	R
LOCALITY N737n : Road Canyon Formation		<i>Anomaloria anomala</i> Cooper and Grant .....	R
<i>Ombonia invecta</i> Cooper and Grant .....	VR	<i>Anteridocus swalloviaus</i> (Shumard) .....	R
LOCALITY N737q : Road Canyon Formation		<i>Aphaurosia rotundata</i> Cooper and Grant .....	R
<i>Acosarina mesoplatys</i> (R.E. King) .....	VR	<i>Aphaurosia scutata</i> Cooper and Grant .....	R
<i>Echinauris bella</i> Cooper and Grant .....	R	<i>Arionthia lamaria</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	VR	<i>Astegesia subquadrata</i> (Girty) .....	VA
<i>Liosotella costata</i> Cooper and Grant .....	R	<i>Collemataria spatulata</i> Cooper and Grant .....	R
LOCALITY N737s : Cathedral Mountain Formation		<i>Composita affinis</i> Girty .....	A
<i>Peniculauris subcostata</i> (R.E. King) .....	VR	<i>Composita pyriformis</i> Cooper and Grant .....	VR
LOCALITY N737u : Lenox Hills Formation		<i>Crenispirifer myllus</i> Cooper and Grant .....	C
<i>Enteleles</i> sp. ....	R	<i>Crurithyris guadalupensis</i> (Girty) .....	C
<i>Eolyttonia</i> cf. <i>fredericksi</i> (R.E. King) .....	VR	<i>Deltarina magnicostata</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	VR	<i>Derbyia filosa</i> Cooper and Grant .....	R
<i>Limbella wolfcampensis</i> (R.E. King) .....	VR	<i>Derbyia</i> sp. 1 .....	VR
<i>Linoproductus semisulcatus</i> Cooper and Grant .....	VR	<i>Dielasma cordatum</i> Girty .....	R
<i>Neophricadothyris transversa</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	C
<i>Spyridiophora compacta</i> Cooper and Grant .....	VR	<i>Dielasma sulcatum</i> Girty .....	R
<i>Teguliferina</i> cf. <i>boesei</i> R.E. King .....	VR	<i>Eliva shumardi</i> Cooper and Grant .....	VR
LOCALITY N737v : Cathedral Mountain Formation		<i>Elivina detecta</i> Cooper and Grant .....	C
<i>Choanodus irregularis</i> Cooper and Grant .....	VR	<i>Fascicosta longaeva</i> (Girty) .....	VR
<i>Institella leonardensis</i> (R.E. King) .....	VR	<i>Geyerella americana</i> Girty .....	VR
<i>Stenosisma triquetrum</i> Cooper and Grant .....	VR	<i>Heteralosia magnispina</i> Cooper and Grant .....	VR
LOCALITY N737w : Word Formation, Lens		<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Allorhynchus permianum wordense</i> Cooper and Grant .....	VR	<i>Heterelasma venustulum</i> Girty .....	VR
<i>Arionthia germana</i> Cooper and Grant .....	R	<i>Hustedia opsia</i> Cooper and Grant .....	A
<i>Cartorhium retusum</i> Cooper and Grant .....	VR	<i>Lirellaria costellata</i> Cooper and Grant .....	VR
<i>Composita enormis</i> Cooper and Grant .....	VR	<i>Martinia rhomboidalis</i> Girty .....	VA
<i>Composita parasulcata</i> Cooper and Grant .....	VR	<i>Ombonia guadalupensis</i> (Girty) .....	C
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	R	<i>Paraspiriferina billingsi</i> (Shumard) .....	C
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR	<i>Paucispinifera latidorsata</i> (Girty) .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	VR	<i>Reticulariina</i> sp. ....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant .....	C	<i>Rigbyella girtyi</i> (Wanner and Sieverts) .....	VR
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	C	<i>Sarganostega pressa</i> Cooper and Grant .....	C
<i>Eolyttonia progressa</i> Cooper and Grant .....	R	<i>Spiriferellina nuda</i> Cooper and Grant .....	VR
<i>Grandaurispina gibbosa</i> Cooper and Grant .....	R	<i>Stenosisma</i> sp. ....	VR
<i>Hustedia pugilla pugilla</i> Cooper and Grant .....	VR	<i>Stenosisma trabeatum</i> Cooper and Grant .....	C
<i>Hustedia</i> sp. ....	VR	<i>Strigirhynchia indentata</i> (Shumard) .....	R
<i>Liosotella irregularis</i> Cooper and Grant .....	VR	<i>Tautosia elegans</i> (Girty) .....	C
<i>Liosotella tetragonalis</i> Cooper and Grant .....	VR	<i>Tautosia shumardiana</i> (Girty) .....	R
		<i>Theodusia emarginata</i> Cooper and Grant .....	VR
		<i>Theodusia trigonalis</i> (Girty) .....	R
		<i>Timorina schuchertensis</i> (Girty) .....	R
		<i>Tropidelasma gregarium</i> (Girty) .....	C

	Rarity code		Rarity code
LOCALITY N738a : Capitan Formation			
<i>Allorhynchus</i> sp. ....	VR	<i>Ombonia guadalupensis</i> (Girty).....	C
<i>Altiplicus periosus</i> Cooper and Grant .....	R	<i>Paraspiriferina billingsi</i> (Shumard).....	C
<i>Anteridocus swallowianus</i> (Shumard).....	C	<i>Paraspiriferina evax</i> (Girty).....	VR
<i>Cartorhium mexicanum</i> (Shumard).....	VR	<i>Paucispinifera latidorsata</i> (Girty) .....	R
<i>Composita emarginata</i> Girty.....	R	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR
<i>Dielasma prolongatum</i> Girty.....	VR	<i>Reticulariina laxa</i> (Girty) .....	VR
<i>Dielasma</i> sp. 5 .....	VR	<i>Reticulariina</i> sp. ....	C
<i>Echinosteges guadalupensis</i> (Shumard) .....	VR	<i>Rigbyella girtyi</i> (Wanner and Sieverts).....	R
<i>Eliva inflata</i> Cooper and Grant.....	VR	<i>Sarganostega pressa</i> Cooper and Grant.....	C
<i>Hustedia rupinata</i> Cooper and Grant.....	R	<i>Scapharina levis</i> Cooper and Grant.....	C
<i>Liosotella popei</i> (Shumard) .....	A	<i>Scapharina rugosa</i> Cooper and Grant .....	VR
<i>Paraspiriferina evax</i> (Girty).....	VR	<i>Sestropoma cribriferum</i> Cooper and Grant .....	VR
<i>Plectelasma guadalupense</i> (Girty).....	VR	<i>Spiriferellina nuda</i> Cooper and Grant .....	VR
<i>Pleurelasma costatum</i> Cooper and Grant.....	R	<i>Stenosisma trabeatum</i> Cooper and Grant .....	R
<i>Rhamnaria shumardi</i> Cooper and Grant.....	R	<i>Tautosia elegans</i> (Girty).....	C
<i>Scapharina levis</i> Cooper and Grant.....	R	<i>Thamnusia capitaneensis</i> (Girty).....	VR
<i>Strigirhynchia indentata</i> (Shumard) .....	R	<i>Thedusia ventricosa</i> Cooper and Grant .....	R
<i>Strigirhynchia transversa</i> Cooper and Grant.....	VR	<i>Timorina ovata</i> (Girty).....	C
<i>Tautosia shumardiana</i> (Girty) .....	R	<i>Timorina schuchertensis</i> (Girty).....	VR
<i>Thamnusia capitaneensis</i> (Girty).....	R	<i>Tropidelasma gregarium</i> (Girty).....	C
<i>Timorina schuchertensis</i> (Girty).....	VR		
LOCALITY N738b : Bell Canyon Formation, Lamar Member		LOCALITY N738c : Cibolo Formation, Breccia Zone	
<i>Acanthocrania vasta</i> Cooper and Grant .....	VR	<i>Antronaria mesicostalis</i> (Girty) .....	VR
<i>Allorhynchus venustulum</i> Cooper and Grant .....	C	<i>Composita</i> sp. ....	VR
<i>Aneuthelasma amygdalinum</i> Cooper and Grant.....	C	<i>Dielasma longisulcatum</i> Cooper and Grant.....	VR
<i>Anomaloria anomala</i> Cooper and Grant .....	A	<i>Echinauris</i> sp. ....	VR
<i>Anteridocus bicostatus</i> Cooper and Grant .....	VR	<i>Enteleles</i> sp. ....	VR
<i>Anteridocus swallowianus</i> (Shumard).....	VR	<i>Gypospirifer infraplicus</i> (R.E. King).....	VR
<i>Aphaurosia scutata</i> Cooper and Grant .....	C	<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	C	<i>Orthotichia irregularis</i> Cooper and Grant .....	VR
<i>Astegosauria subquadrata</i> (Girty) .....	VA	<i>Rhipidomella hessensis</i> R.E. King.....	VR
<i>Cleiothyridina pilularis</i> Cooper and Grant .....	C	<i>Scacchinella titan</i> Cooper and Grant .....	R
<i>Collemataria</i> sp. ....	VR	<i>Stenosisma multicostum</i> Stehli.....	VR
<i>Collemataria spatulata</i> Cooper and Grant.....	C	<i>Tropidelasma robertsi</i> Cooper and Grant .....	VR
<i>Composita affinis</i> Girty.....	A		
<i>Composita emarginata</i> Girty.....	R	LOCALITY N738d : Cibolo Formation, Transition Zone	
<i>Crenispirifer myllus</i> Cooper and Grant .....	C	<i>Nudauris whitei</i> Cooper and Grant.....	VR
<i>Crurithyris guadalupensis</i> (Girty).....	A		
<i>Crurithyris</i> sp. ....	VR	LOCALITY N738f : Cibolo Formation, Spicule Zone	
<i>Deltarina magnicostata</i> Cooper and Grant.....	C	<i>Acritosia teguliferoides</i> (R.E. King).....	VR
<i>Derbyia</i> sp. 1 .....	C	<i>Institella leonardensis</i> (R.E. King).....	VR
<i>Derbyia texta</i> Cooper and Grant.....	R	<i>Rhipidomella hessensis</i> R.E. King.....	R
<i>Dielasma cordatum</i> Girty.....	C	<i>Xenosteges adherens</i> Muir-Wood and Cooper.....	VR
<i>Dielasma</i> sp. ....	C		
<i>Dielasma subcirculare</i> Cooper and Grant.....	R	LOCALITY N738g : Cibolo Formation, Thin-Bedded Zone	
<i>Dielasma sulcatum</i> Girty .....	C	<i>Cenorhynchia saginata</i> Cooper and Grant .....	VR
<i>Dyoros (Dyoros) hillanus</i> (Girty).....	R	<i>Composita</i> sp. ....	R
<i>Dyoros (Dyoros) subliratus</i> (Girty).....	VR	<i>Dyoros (Dyoros) transversus</i> Cooper and Grant.....	VR
<i>Elivina? annectans</i> Cooper and Grant .....	VR	<i>Echinauris bella</i> Cooper and Grant.....	R
<i>Elivina detecta</i> Cooper and Grant.....	C	<i>Heterelasma</i> sp. ....	VR
<i>Eolyttonia</i> sp. 3 .....	VR	<i>Hustedia</i> sp. ....	R
<i>Fascicosta longaeva</i> (Girty).....	VR	<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR
<i>Geyerella americana</i> Girty.....	VR	<i>Neophricadothyris cordata</i> Cooper and Grant .....	VR
<i>Heteralosia magnispina</i> Cooper and Grant.....	C	<i>Paraspiriferina cellulana</i> Cooper and Grant .....	VR
<i>Heteralosia</i> sp. ....	VR	<i>Petasmatherus pumilus</i> Cooper and Grant.....	C
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Heterelasma venustulum</i> Girty .....	VR		
<i>Hustedia opsia</i> Cooper and Grant .....	VA	LOCALITY N738h : Cibolo Formation, Transition Zone	
<i>Martinia rhomboidalis</i> Girty .....	VA	<i>Enteleles</i> sp. ....	VR
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Hustedia hessensis</i> R.E. King.....	VR
<i>Metriolepis</i> sp. ....	VR	<i>Meekella magnifica</i> Cooper and Grant.....	VR
<i>Notothyris</i> sp. ....	VR	<i>Nudauris</i> sp. ....	VR
		<i>Orthotichia newelli</i> Cooper and Grant.....	VR

	Rarity code		Rarity code
LOCALITY N738h - Continued		<i>Diplanus rarus</i> Cooper and Grant.....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Rhipidomella hessensis</i> R.E. King.....	VR	LOCALITY N738t : Cibolo Formation, Transition	
<i>Stenosisma multicostum</i> Stehli.....	VR	Zone	
LOCALITY N738l : Cibolo Formation, Thin-Bedded		<i>Stenosisma multicostum</i> Stehli.....	VR
Zone		LOCALITY N739 : Capitan Formation	
<i>Acosarina mesoplatys</i> (R.E. King).....	VR	<i>Anteridocus swallowianus</i> (Shumard).....	C
<i>Cenorhynchia saginata</i> Cooper and Grant .....	R	<i>Composita affinis</i> Girty.....	R
<i>Composita</i> sp. ....	R	<i>Dielasma prolongatum</i> Girty.....	VR
<i>Dielasma</i> sp. ....	VR	<i>Dielasma</i> sp. 5 .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>transversus</i> Cooper and Grant.....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>hillanus</i> (Girty).....	VR
<i>Echinauris bella</i> Cooper and Grant.....	C	<i>Eliva shumardi</i> Cooper and Grant .....	R
<i>Echinauris</i> sp. ....	VR	<i>Elivina compacta</i> (Girty).....	VR
<i>Heterelasma</i> sp. ....	VR	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Hustedia consuta</i> Cooper and Grant .....	C	<i>Heterelasma venustum</i> Girty .....	VR
<i>Hustedia</i> cf. <i>cuneata</i> Cooper and Grant.....	VR	<i>Hustedia opsia</i> Cooper and Grant .....	R
<i>Liosotella costata</i> Cooper and Grant.....	A	<i>Liosotella popei</i> (Shumard) .....	VR
<i>Meekella</i> sp. ....	VR	<i>Paraspiriferina billingsi</i> (Shumard).....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper.....	VR	<i>Paraspiriferina evax</i> (Girty).....	VR
<i>Neophricadothyris cordata</i> Cooper and Grant.....	R	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR
<i>Paraspiriferina cellulana</i> Cooper and Grant .....	R	<i>Stenosisma obliquum</i> Cooper and Grant.....	R
<i>Paucispinifera</i> sp. ....	VR	<i>Strigirhynchia indentata</i> (Shumard) .....	VR
<i>Petasmatherus pumilus</i> Cooper and Grant.....	C	<i>Tautosia elegans</i> (Girty) .....	VR
<i>Phrenophoria</i> sp. ....	VR	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Reticulariina bufala</i> Cooper and Grant .....	R	<i>Timorina schuchertensis</i> (Girty).....	VR
<i>Reticulariina</i> sp. ....	VR	LOCALITY N739g : Skinner Ranch Formation, Sullivan	
<i>Rhamnaria</i> sp. ....	VR	Peak Member	
<i>Stenosisma</i> sp. ....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
LOCALITY N738n : Cibolo Formation, Transition		<i>Acritosia peculiaris</i> Cooper and Grant .....	VR
Zone		<i>Chonosteges limbatus</i> Cooper and Grant .....	R
<i>Enteleles</i> sp. ....	VR	<i>Derbyia</i> sp. ....	VR
<i>Nudauris</i> sp. ....	VR	<i>Diplanus</i> sp. ....	VR
<i>Reticulatia robusta</i> Cooper and Grant .....	VR	<i>Enteleles</i> sp. ....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	VR	<i>Limbella limbata</i> Cooper and Grant .....	VR
LOCALITY N738o : Cibolo Formation, Spicule Zone		<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Institella leonardensis</i> (R.E. King).....	VR	<i>Spyridiophora reticulata</i> (R.E. King).....	VR
LOCALITY N738q : Cibolo Formation, Spicule Zone		LOCALITY N739k : Cibolo Formation, Spicule Zone	
<i>Dielasma</i> sp. ....	VR	<i>Xestosia schucherti</i> (R.E. King) .....	VR
<i>Limbella limbata</i> Cooper and Grant .....	VR	LOCALITY N739l : Skinner Ranch Formation	
LOCALITY N738r : Cibolo Formation, Breccia Zone		<i>Antronaria mesicostalis</i> (Girty) .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	R	<i>Limbella limbata</i> Cooper and Grant .....	VR
<i>Acritosia teguliferoides</i> (R.E. King).....	R	<i>Neophricadothyris catatona</i> Cooper and Grant .....	VR
<i>Crenispirifer angulatus</i> (R.E. King).....	VR	<i>Pontisia</i> sp. ....	VR
<i>Derbyia</i> aff. <i>nasuta</i> Girty.....	R	<i>Stenosisma pyraustoides</i> Cooper and Grant.....	VR
<i>Diplanus rarus</i> Cooper and Grant.....	VR	LOCALITY N739m : Cibolo Formation, Breccia	
<i>Elliottella</i> cf. <i>varicostata</i> Cooper and Grant.....	VR	Zone	
<i>Enteleles</i> sp. ....	VR	<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR
<i>Eolyttonia gigantea</i> Cooper and Grant.....	VR	LOCALITY N740 : Capitan Formation	
<i>Eolyttonia</i> sp. ....	VR	<i>Allorhynchus</i> sp. ....	VR
<i>Geyerella</i> cf. <i>hessi</i> Cooper and Grant .....	R	<i>Anteridocus swallowianus</i> (Shumard).....	C
<i>Gypospirifer infraplicus</i> (R.E. King).....	VR	<i>Composita emarginata</i> Girty .....	R
<i>Hustedia</i> sp. ....	VR	<i>Dielasma</i> sp. ....	VR
<i>Meekella attenuata</i> Girty .....	C	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>hillanus</i> (Girty).....	VR
<i>Meekella caperata</i> Cooper and Grant.....	VR	<i>Eliva shumardi</i> Cooper and Grant .....	R
<i>Meekella</i> sp. ....	VR	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Orthotichia</i> cf. <i>newelli</i> Cooper and Grant.....	A	<i>Hustedia opsia</i> Cooper and Grant .....	VR
<i>Scacchinella titan</i> Cooper and Grant .....	VA	<i>Liosotella popei</i> (Shumard) .....	VR
<i>Teguliferina conida</i> (Stehli) .....	VR	<i>Paraspiriferina billingsi</i> (Shumard).....	VR
LOCALITY N738s : Cibolo Formation, Breccia Zone		<i>Paraspiriferina evax</i> (Girty).....	VR
<i>Antronaria mesicostalis</i> (Girty) .....	VR	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR
<i>Crenispirifer angulatus</i> (R.E. King).....	VR		

	Rarity code		Rarity code
LOCALITY N740 - Continued		LOCALITY N740c : Bell Canyon Formation, Hegler	
<i>Ptilotorhynchus</i> sp. ....	VR	Member	
<i>Scapharina levis</i> Cooper and Grant.....	R	<i>Acanthocrania</i> sp. ....	VR
<i>Stenosisma obliquus</i> Cooper and Grant.....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant.....	R
<i>Strigirhynchia transversa</i> Cooper and Grant.....	VR	<i>Altiplecus extensus</i> Cooper and Grant.....	VR
<i>Tautosia elegans</i> (Girty).....	R	<i>Anteridocus swallowianus</i> (Shumard).....	VR
<i>Tautosia shumardiana</i> (Girty).....	VR	<i>Arionthia alata</i> Cooper and Grant .....	VR
<i>Thamnusia capitaneensis</i> (Girty).....	VR	<i>Arionthia lamaria</i> Cooper and Grant .....	R
<i>Timorina ovata</i> (Girty).....	VR	<i>Arionthia polypleura</i> (Girty).....	R
LOCALITY N740a : Bell Canyon Formation, Rader		<i>Bryorhynchus bisulcatum</i> (Shumard).....	C
Member		<i>Composita</i> sp. ....	C
<i>Altiplecus? deltosus</i> Cooper and Grant.....	VR	<i>Craspedona newelli</i> Cooper and Grant.....	VR
<i>Altiplecus extensus</i> Cooper and Grant.....	VR	<i>Crenispirifer jubatus</i> Cooper and Grant .....	R
<i>Altiplecus trapezoidalis</i> Cooper and Grant .....	VR	<i>Derbyia</i> sp. ....	C
<i>Anteridocus swallowianus</i> (Shumard).....	R	<i>Dielasma cordatum</i> Girty.....	VR
<i>Arionthia polypleura</i> (Girty).....	VR	<i>Dielasma sulcatum</i> Girty .....	VR
<i>Bryorhynchus bisulcatum</i> (Shumard).....	C	<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	R
<i>Chonetinetes</i> sp. ....	VR	<i>Echinosteges guadalupensis</i> (Shumard).....	VR
<i>Chonetinetes varians</i> Cooper and Grant.....	VR	<i>Elivina? annectans</i> Cooper and Grant .....	VR
<i>Composita affinis</i> Girty.....	R	<i>Fascicosta elongata</i> Cooper and Grant.....	VR
<i>Composita</i> sp. ....	R	<i>Glossothyropsis juvenis</i> Cooper and Grant.....	R
<i>Craspedona newelli</i> Cooper and Grant.....	VR	<i>Heteralosia paucispinosa</i> Cooper and Grant.....	VR
<i>Crenispirifer jubatus</i> Cooper and Grant .....	R	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Deltarina magnicostata</i> Cooper and Grant.....	VR	<i>Hustedia rupinata</i> Cooper and Grant .....	VR
<i>Derbyia</i> sp. ....	R	<i>Hustedia samia</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	VR	<i>Hustedia</i> sp. ....	A
<i>Dielasma sulcatum</i> Girty .....	VR	<i>Metriolepis nabis</i> Cooper and Grant .....	VR
<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	R	<i>Metriolepis pedicosa</i> Cooper and Grant.....	VR
<i>Elivina? annectans</i> Cooper and Grant .....	C	<i>Micraphelia scitula</i> Cooper and Grant .....	C
<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant.....	R	<i>Micraphelia</i> sp. ....	R
<i>Glossothyropsis juvenis</i> Cooper and Grant.....	VR	<i>Paraspiriferina billingsi</i> (Shumard).....	R
<i>Heteralosia magnispina</i> Cooper and Grant.....	VR	<i>Paucispinifera</i> sp. ....	R
<i>Heteralosia paucispinosa</i> Cooper and Grant.....	VR	<i>Petrocrania</i> sp. ....	VR
<i>Heteralosia</i> sp. ....	VR	<i>Phrenophoria perplexa</i> Cooper and Grant .....	VR
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Plectelasma guadalupense</i> (Girty).....	R
<i>Hustedia demissa</i> Cooper and Grant.....	R	<i>Pseudoleptodus guadalupensis</i> (Stehli).....	R
<i>Hustedia opsia</i> Cooper and Grant .....	C	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	R
<i>Hustedia rupinata</i> Cooper and Grant .....	R	<i>Rallacosta imporata</i> Cooper and Grant .....	VR
<i>Hustedia samia</i> Cooper and Grant.....	C	<i>Reticulariina</i> sp. ....	R
<i>Hustedia</i> sp. ....	C	<i>Sarganostega pressa</i> Cooper and Grant.....	R
<i>Madarosia anterolamellata</i> Cooper and Grant .....	VR	<i>Sarganostega transversalis</i> Cooper and Grant .....	R
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Scapharina levis</i> Cooper and Grant.....	VR
<i>Metriolepis pedicosa</i> Cooper and Grant.....	R	<i>Scapharina rugosa</i> Cooper and Grant .....	R
<i>Micraphelia scitula</i> Cooper and Grant .....	C	<i>Sestropoma cribriferum</i> Cooper and Grant .....	R
<i>Micraphelia subalata</i> Cooper and Grant .....	C	<i>Spiriferella sulcifer</i> (Shumard).....	VR
<i>Paraspiriferina billingsi</i> (Shumard).....	R	<i>Thamnusia capitaneensis</i> (Girty).....	VR
<i>Phrenophoria perplexa</i> Cooper and Grant.....	VR	<i>Thedusia emarginata</i> Cooper and Grant .....	VR
<i>Plectelasma guadalupense</i> (Girty).....	VR	<i>Thedusia trigonalis</i> (Girty).....	R
<i>Pseudoleptodus guadalupensis</i> (Stehli).....	VR	<i>Thedusia ventricosa</i> Cooper and Grant .....	R
<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR	<i>Timorina attenuata</i> Cooper and Grant.....	R
<i>Rallacosta imporata</i> Cooper and Grant .....	R	<i>Xenosaria exotica</i> Cooper and Grant .....	R
<i>Reticulariina echinata</i> Cooper and Grant.....	VR	LOCALITY N740d : Bell Canyon Formation, Hegler	
<i>Reticulariina</i> sp. ....	VR	Member	
<i>Sarganostega transversalis</i> Cooper and Grant.....	R	<i>Acanthocrania</i> sp. ....	VR
<i>Scapharina levis</i> Cooper and Grant.....	VR	<i>Altiplecus? deltosus</i> Cooper and Grant.....	C
<i>Scapharina rugosa</i> Cooper and Grant .....	VR	<i>Altiplecus extensus</i> Cooper and Grant.....	VR
<i>Sestropoma cribriferum</i> Cooper and Grant .....	R	<i>Arionthia alata</i> Cooper and Grant .....	VR
<i>Spiriferella sulcifer</i> (Shumard) .....	C	<i>Arionthia lamaria</i> Cooper and Grant .....	VR
<i>Stenosisma</i> sp. ....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard).....	VR
<i>Tautosia shumardiana</i> (Girty).....	VR	<i>Chonetinetes</i> sp. ....	VR
<i>Thamnusia capitaneensis</i> (Girty).....	VR	<i>Chonetinetes varians</i> Cooper and Grant.....	VR
<i>Thedusia trigonalis</i> (Girty).....	R	<i>Composita</i> sp. ....	R
<i>Thedusia ventricosa</i> Cooper and Grant .....	R	<i>Craspedona newelli</i> Cooper and Grant.....	VR
<i>Tropidelasma gregarium</i> (Girty).....	VR	<i>Crenispirifer jubatus</i> Cooper and Grant .....	C



	Rarity code		Rarity code
LOCALITY N740d - Continued			
<i>Derbyia</i> sp. ....	C	<i>Arionthia lamaria</i> Cooper and Grant .....	R
<i>Dielasma</i> sp. ....	R	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	C
<i>Dielasma sulcatum</i> Girty .....	R	<i>Chonetinetes</i> sp. ....	R
<i>Elivina? annectans</i> Cooper and Grant .....	C	<i>Composita affinis</i> Girty .....	C
<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant .....	R	<i>Craspedona newelli</i> Cooper and Grant .....	VR
<i>Glossothyropsis juvenis</i> Cooper and Grant .....	VR	<i>Crenispirifer jubatus</i> Cooper and Grant .....	C
<i>Glossothyropsis</i> sp. (Girty) .....	VR	<i>Derbyia</i> sp. ....	C
<i>Heteralosia paucispinosa</i> Cooper and Grant .....	R	<i>Dielasma</i> sp. ....	VR
<i>Heteralosia</i> sp. ....	VR	<i>Dielasma sulcatum</i> Girty .....	R
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	C
<i>Hustedia demissa</i> Cooper and Grant .....	R	<i>Echinosteges guadalupensis</i> (Shumard) .....	VR
<i>Hustedia opsia</i> Cooper and Grant .....	C	<i>Eliva shumardi</i> Cooper and Grant .....	C
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Fascicosta bella</i> Cooper and Grant .....	VR
<i>Hustedia samiata</i> Cooper and Grant .....	C	<i>Glossothyropsis juvenis</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	C	<i>Glossothyropsis polita</i> Cooper and Grant .....	R
<i>Metriolepis nabis</i> Cooper and Grant .....	R	<i>Heteralosia magnispina</i> Cooper and Grant .....	C
<i>Metriolepis pedicosa</i> Cooper and Grant .....	R	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Metriolepis</i> sp. ....	VR	<i>Hustedia rupinata</i> Cooper and Grant .....	VA
<i>Micraphelia scitula</i> Cooper and Grant .....	A	<i>Hustedia samiata</i> Cooper and Grant .....	C
<i>Micraphelia</i> sp. ....	C	<i>Metriolepis nabis</i> Cooper and Grant .....	R
<i>Micraphelia subalata</i> Cooper and Grant .....	R	<i>Metriolepis pedicosa</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	A	<i>Micraphelia subalata</i> Cooper and Grant .....	C
<i>Petrocrania</i> sp. ....	VR	<i>Paraspiriferina billingsi</i> (Shumard) .....	A
<i>Plectelasma guadalupense</i> (Girty) .....	C	<i>Paucispinifera latidorsata</i> (Girty) .....	VR
<i>Pseudodielasma</i> sp. ....	VR	<i>Phrenophoria perplexa</i> Cooper and Grant .....	VR
<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	VR	<i>Plectelasma guadalupense</i> (Girty) .....	C
<i>Rallacosta imporcata</i> Cooper and Grant .....	VR	<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	VR
<i>Reticulariina echinata</i> Cooper and Grant .....	R	<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR
<i>Reticulariina phoxa</i> Cooper and Grant .....	VR	<i>Rallacosta imporcata</i> Cooper and Grant .....	VR
<i>Reticulariina</i> sp. ....	VR	<i>Sarganostega transversalis</i> Cooper and Grant .....	R
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Scapharina levis</i> Cooper and Grant .....	R
<i>Scapharina rugosa</i> Cooper and Grant .....	R	<i>Scapharina rugosa</i> Cooper and Grant .....	R
<i>Sestropoma cribriferum</i> Cooper and Grant .....	R	<i>Sestropoma cribriferum</i> Cooper and Grant .....	C
<i>Spiriferella sulcifer</i> (Shumard) .....	C	<i>Spiriferella sulcifer</i> (Shumard) .....	C
<i>Thamnosia capitanensis</i> (Girty) .....	VR	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Thedusia trigonalis</i> (Girty) .....	C	<i>Thamnosia capitanensis</i> (Girty) .....	R
<i>Thedusia ventricosa</i> Cooper and Grant .....	VR	<i>Thedusia trigonalis</i> (Girty) .....	C
<i>Timorina attenuata</i> Cooper and Grant .....	VR	<i>Timorina attenuata</i> Cooper and Grant .....	VR
		<i>Timorina ovata</i> (Girty) .....	VR
LOCALITY N740g : Bell Canyon Formation, Rader Member			
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	<i>Acanthocrania</i> sp. ....	VR
<i>Craspedona newelli</i> Cooper and Grant .....	R	<i>Altiplecus? deltosus</i> Cooper and Grant .....	R
<i>Eliva inflata</i> Cooper and Grant .....	VR	<i>Anteridocus swallovianus</i> (Shumard) .....	R
<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	A
<i>Strigirhynchia indentata</i> (Shumard) .....	VR	<i>Chonetinetes</i> sp. ....	R
<i>Tropidelasma</i> sp. ....	VR	<i>Chonetinetes varians</i> Cooper and Grant .....	R
		<i>Composita affinis</i> Girty .....	C
LOCALITY N740h : Bell Canyon Formation, Rader Member			
<i>Anteridocus swallovianus</i> (Shumard) .....	VR	<i>Composita</i> sp. ....	R
<i>Arionthia alata</i> Cooper and Grant .....	VR	<i>Craspedona newelli</i> Cooper and Grant .....	R
<i>Composita emarginata</i> Girty .....	R	<i>Crenispirifer jubatus</i> Cooper and Grant .....	C
<i>Derbyia</i> sp. ....	R	<i>Derbyia</i> sp. ....	C
<i>Eliva inflata</i> Cooper and Grant .....	VR	<i>Dielasma</i> sp. ....	VR
<i>Thamnosia capitanensis</i> (Girty) .....	VR	<i>Dielasma sulcatum</i> Girty .....	R
		<i>Dyoros (Dyoros) intrepidus</i> Cooper and Grant .....	C
LOCALITY N740i : Bell Canyon Formation, Rader Member			
<i>Acanthocrania</i> sp. ....	VR	<i>Echinosteges guadalupensis</i> (Shumard) .....	VR
<i>Altiplecus? deltosus</i> Cooper and Grant .....	C	<i>Elivina? annectans</i> Cooper and Grant .....	C
<i>Anteridocus swallovianus</i> (Shumard) .....	R	<i>Fascicosta bella</i> Cooper and Grant .....	VR
		<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant .....	VR
		<i>Glossothyropsis juvenis</i> Cooper and Grant .....	R
		<i>Heteralosia paucispinosa</i> Cooper and Grant .....	R
		<i>Heteralosia</i> sp. ....	VR
		<i>Heterelasma shumardianum</i> Girty .....	VR
		<i>Hustedia demissa</i> Cooper and Grant .....	R

	Rarity code		Rarity code
LOCALITY N740j - Continued		<i>Martinia rhomboidalis</i> Girty .....	R
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Ombonia guadalupensis</i> (Girty) .....	VR
<i>Hustedia samiata</i> Cooper and Grant .....	C	<i>Stenosisma trabeatum</i> Cooper and Grant .....	VR
<i>Hustedia</i> sp. ....	A	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Madarosia anterolamellata</i> Cooper and Grant .....	R	<i>Thamnosia capitanensis</i> (Girty) .....	VR
<i>Metriolepis pedicosa</i> Cooper and Grant .....	R	LOCALITY N740n : Capitan Formation	
<i>Micraphelia scitula</i> Cooper and Grant .....	C	<i>Anteridocus swallowianus</i> (Shumard) .....	R
<i>Micraphelia subalata</i> Cooper and Grant .....	A	<i>Arionthia lamaria</i> Cooper and Grant .....	R
<i>Paraspiriferina billingsi</i> (Shumard) .....	C	<i>Astegosauria subquadrata</i> (Girty) .....	VR
<i>Petrocrania</i> sp. ....	VR	<i>Composita emarginata</i> Girty .....	C
<i>Phrenophoria perplexa</i> Cooper and Grant .....	R	<i>Dielasma</i> sp. ....	VR
<i>Plectelasma guadalupense</i> (Girty) .....	C	<i>Dielasma sulcatum</i> Girty .....	VR
<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	VR	<i>Eliva inflata</i> Cooper and Grant .....	R
<i>Ptilotorhynchus delicatum</i> Cooper and Grant .....	VR	<i>Eliva shumardi</i> Cooper and Grant .....	C
<i>Rallacosta imporcata</i> Cooper and Grant .....	VR	<i>Heterelasma shumardianum</i> Girty .....	VR
<i>Reticulariina</i> sp. ....	R	<i>Hustedia</i> sp. ....	VR
<i>Rhamnaria</i> sp. ....	VR	<i>Paraspiriferina billingsi</i> (Shumard) .....	C
<i>Sarganostega transversalis</i> Cooper and Grant .....	R	<i>Stenosisma trabeatum</i> Cooper and Grant .....	C
<i>Scapharina levis</i> Cooper and Grant .....	VR	<i>Strigirhynchia indentata</i> (Shumard) .....	R
<i>Scapharina rugosa</i> Cooper and Grant .....	R	<i>Tautosia elegans</i> (Girty) .....	C
<i>Sestropoma cribriferum</i> Cooper and Grant .....	C	<i>Tautosia shumardiana</i> (Girty) .....	R
<i>Spiriferella sulcifer</i> (Shumard) .....	C	<i>Timorina attenuata</i> Cooper and Grant .....	VR
<i>Stenosisma</i> sp. ....	VR	<i>Timorina schuchertensis</i> (Girty) .....	VR
<i>Tautosia elegans</i> (Girty) .....	VR	<i>Tropidelasma gregarium</i> (Girty) .....	VR
<i>Thamnosia capitanensis</i> (Girty) .....	VR	LOCALITY N740o : Capitan Formation	
<i>Thedusia angustata</i> Cooper and Grant .....	VR	<i>Anteridocus swallowianus</i> (Shumard) .....	VR
<i>Thedusia trigonalis</i> (Girty) .....	C	<i>Astegosauria subquadrata</i> (Girty) .....	VR
<i>Thedusia ventricosa</i> Cooper and Grant .....	R	<i>Eliva inflata</i> Cooper and Grant .....	VR
<i>Timorina attenuata</i> Cooper and Grant .....	VR	<i>Elivina compacta</i> (Girty) .....	VR
LOCALITY N740k : Capitan Formation		<i>Fascicostea longaeva</i> (Girty) .....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	<i>Strigirhynchia indentata</i> (Shumard) .....	VR
<i>Astegosauria subquadrata</i> (Girty) .....	C	LOCALITY N741 : Bone Spring Formation	
<i>Composita emarginata</i> Girty .....	R	<i>Entelestes stehlii</i> Cooper and Grant .....	VR
<i>Dielasma</i> sp. ....	VR	<i>Hustedia hessensis</i> R.E. King .....	VR
<i>Dielasma sulcatum</i> Girty .....	VR	<i>Reticulariina newelli</i> (Stehli) .....	VR
<i>Eliva inflata</i> Cooper and Grant .....	VR	<i>Reticulariina tetrica</i> Cooper and Grant .....	VR
<i>Heterelasma shumardianum</i> Girty .....	VR	LOCALITY N741a : Road Canyon Formation	
<i>Hustedia</i> sp. ....	VR	<i>Acosarina mesoplatys</i> (R.E. King) .....	VR
<i>Martinia rhomboidalis</i> Girty .....	R	<i>Cenorhynchia atmata</i> Cooper and Grant .....	R
<i>Ombonia guadalupensis</i> (Girty) .....	VR	<i>Cenorhynchia parvula</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	VR	<i>Chondronia ovalis</i> Cooper and Grant .....	R
<i>Strigirhynchia indentata</i> (Shumard) .....	VR	<i>Composita crassa</i> Cooper and Grant .....	R
<i>Tautosia elegans</i> (Girty) .....	VR	<i>Cyclacantharia paucispinosa</i> Cooper and Grant .....	VR
<i>Tautosia shumardiana</i> (Girty) .....	VR	<i>Derbyia informis</i> Cooper and Grant .....	VR
<i>Thamnosia capitanensis</i> (Girty) .....	VR	<i>Edriostege multispinosus</i> Muir-Wood and Cooper .....	VR
LOCALITY N740-l : Capitan Formation		<i>Hercosetia cribrosa</i> Cooper and Grant .....	VR
<i>Anteridocus swallowianus</i> (Shumard) .....	VR	<i>Meekella calathica</i> Cooper and Grant .....	VR
<i>Composita emarginata</i> Girty .....	R	<i>Neophricadotheris bullata</i> Cooper and Grant .....	VR
<i>Eliva inflata</i> Cooper and Grant .....	R	<i>Neospirifer bakeri columbarius</i> Cooper and Grant .....	VR
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Paucispinifera sulcata</i> Cooper and Grant .....	VR
<i>Liosotella popei</i> (Shumard) .....	R	<i>Peniculauris peniculifera</i> Cooper and Grant .....	VR
<i>Paraspiriferina billingsi</i> (Shumard) .....	R	<i>Spiriferellina tricola</i> Cooper and Grant .....	VR
<i>Pseudoleptodus guadalupensis</i> (Stehli) .....	R	<i>Stenosisma calvatum</i> Cooper and Grant .....	R
<i>Reticulariina</i> sp. ....	VR	LOCALITY N741h : Hueco Formation	
<i>Scapharina levis</i> Cooper and Grant .....	VR	<i>Reticulariina hueconiana</i> Cooper and Grant .....	VR
<i>Stenosisma</i> sp. ....	VR	<i>Stenosisma hueconianum</i> (Girty) .....	A
<i>Stenosisma trabeatum</i> Cooper and Grant .....	VR	LOCALITY N741i : Road Canyon Formation	
<i>Thamnosia capitanensis</i> (Girty) .....	R	<i>Stenosisma</i> sp. ....	VR
LOCALITY N740m : Capitan Formation		LOCALITY N741k : Skinner Ranch Formation, Poplar Tank Member	
<i>Anteridocus swallowianus</i> (Shumard) .....	VR	<i>Cancrinella parva</i> Cooper and Grant .....	R
<i>Astegosauria subquadrata</i> (Girty) .....	R		
<i>Composita emarginata</i> Girty .....	VR		

	Rarity code		Rarity code
LOCALITY N741k - Continued			
<i>Chonosteges</i> aff. <i>limbatus</i> Cooper and Grant .....	R	<i>Pseudoleptodus grandis</i> Cooper and Grant .....	R
<i>Compressopproductus</i> sp. 2 .....	VR	<i>Reticulariina cerina</i> Cooper and Grant .....	VR
<i>Compressopproductus</i> sp. ....	VR	<i>Spiriferella</i> sp. ....	C
<i>Derbyia</i> sp. ....	VR	<i>Xenosteges quadratus</i> Cooper and Grant .....	VR
<i>Diplanus lamellatus</i> (R.E. King) .....	R	LOCALITY N741s : Cathedral Mountain Formation	
<i>Glyptosteges sulcatus</i> Cooper and Grant .....	VR	<i>Agelesia triangularis</i> (R.E. King) .....	VR
<i>Hustedia</i> sp. ....	R	<i>Enteleles</i> sp. ....	VR
<i>Kochiproductus</i> sp. ....	VR	<i>Institella leonardensis</i> (R.E. King) .....	VR
<i>Limbella limbata</i> Cooper and Grant .....	R	<i>Meekella</i> sp. ....	VR
<i>Meekella</i> sp. ....	VR	<i>Rhipidomella hispidula</i> Cooper and Grant .....	VR
<i>Oncosarina spinicostata</i> Cooper and Grant .....	C	LOCALITY N742 : Bone Spring Formation	
<i>Parenteleles cooperi</i> R.E. King .....	R	<i>Crenispirifer angulatus</i> (R.E. King) .....	VR
<i>Pseudoleptodus</i> sp. ....	VR	<i>Elliottella transversalis</i> (Stehli) .....	R
<i>Rhipidomella</i> aff. <i>hessensis</i> R.E. King .....	VR	<i>Kozlowskia kingi</i> Stehli .....	VR
<i>Spyridiophora reticulata</i> (R.E. King) .....	R	<i>Limbella victorioensis</i> Stehli .....	VR
<i>Teguliferina boesei</i> R.E. King .....	R	LOCALITY N742a : Hess Formation	
LOCALITY N741p : Word Formation, Lens		<i>Scacchinella titan</i> Cooper and Grant .....	VR
<i>Arionthia germana</i> Cooper and Grant .....	R	LOCALITY N742b : Word Formation, Lens	
<i>Composita parasulcata</i> Cooper and Grant .....	R	<i>Allorhynchus triangulatum</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	R	<i>Cartorhium orbiculatum</i> Cooper and Grant .....	VR
<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR	<i>Composita</i> sp. ....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR	<i>Cooperina inexpectata</i> Termier, Termier and Pajaud .....	VR
<i>Derbyia pannucia</i> Cooper and Grant .....	VR	<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR
<i>Derbyia texta</i> Cooper and Grant .....	C	<i>Derbyia</i> sp. ....	R
<i>Dielasma</i> sp. ....	VR	<i>Derbyia texta</i> Cooper and Grant .....	R
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant .....	A	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant .....	A
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>extensus</i> Cooper and Grant .....	R
<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR	<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	C
<i>Eolyttonia progressa</i> Cooper and Grant .....	R	<i>Echinosteges tuberculatus</i> (R.E. King) .....	VR
<i>Grandaurispina crassa</i> Cooper and Grant .....	R	<i>Grandaurispina crassa</i> Cooper and Grant .....	R
<i>Grandaurispina gibbosa</i> Cooper and Grant .....	R	<i>Hustedia</i> sp. ....	C
<i>Hustedia pugilla hebetata</i> Cooper and Grant .....	R	<i>Liosotella irregularis</i> Cooper and Grant .....	R
<i>Hustedia</i> sp. ....	C	<i>Liosotella wordensis</i> (R.E. King) .....	C
<i>Liosotella irregularis</i> Cooper and Grant .....	R	<i>Meekella skenoides</i> Girty .....	VR
<i>Liosotella tetragonalis</i> Cooper and Grant .....	R	<i>Paucispinifera quadrata</i> Cooper and Grant .....	R
<i>Liosotella wordensis</i> (R.E. King) .....	C	<i>Pseudoleptodus grandis</i> Cooper and Grant .....	R
<i>Meekella skenoides</i> Girty .....	VR	<i>Reticulariina cerina</i> Cooper and Grant .....	C
<i>Megousia definita</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	R
<i>Neospirifer amphigyus</i> Cooper and Grant .....	VR	<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	R
<i>Paraspiriferina rotundata</i> Cooper and Grant .....	R	<i>Spiriferella clypeata</i> Cooper and Grant .....	R
<i>Paucispinifera quadrata</i> Cooper and Grant .....	R	<i>Spiriferellina hilli</i> (Girty) .....	R
<i>Pseudoleptodus grandis</i> Cooper and Grant .....	VR	<i>Spiriferinaella scalpata</i> Cooper and Grant .....	VR
<i>Reticulariina cerina</i> Cooper and Grant .....	R	<i>Stenoscisma renode</i> Cooper and Grant .....	VR
<i>Rhamnaria kingorum</i> Muir-Wood and Cooper .....	C	<i>Thamnosia phragmophora</i> Cooper and Grant .....	VR
<i>Rhynchopora tenera</i> Cooper and Grant .....	VR	<i>Xenosteges quadratus</i> Cooper and Grant .....	VR
<i>Spiriferella</i> sp. ....	R	LOCALITY N742c : Neal Ranch Formation	
<i>Stenoscisma</i> sp. ....	VR	<i>Camarelasma neali</i> Cooper and Grant .....	VR
<i>Xenosteges quadratus</i> Cooper and Grant .....	VR	<i>Cenorhynchia hebata</i> Cooper and Grant .....	R
LOCALITY N741q : Word Formation, Lens		<i>Chondronia rectimarginata</i> Cooper and Grant .....	R
<i>Arionthia germana</i> Cooper and Grant .....	C	<i>Cleiothyridina rectimarginata</i> Cooper and Grant .....	R
<i>Composita parasulcata</i> Cooper and Grant .....	R	<i>Composita</i> sp. ....	VR
<i>Cyclacantharia kingorum</i> Cooper and Grant .....	VR	<i>Crurithyris tumibilis</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>convexus</i> Cooper and Grant .....	VA	<i>Derbyia carteri</i> Cooper and Grant .....	VR
<i>Echinauris lateralis</i> Muir-Wood and Cooper .....	C	<i>Derbyia</i> sp. ....	VR
<i>Eolyttonia progressa</i> Cooper and Grant .....	R	<i>Diplanus catatonus</i> Cooper and Grant .....	VR
<i>Grandaurispina crassa</i> Cooper and Grant .....	R	<i>Geyerella kingorum</i> Cooper and Grant .....	VR
<i>Grandaurispina elongata</i> Cooper and Grant .....	VR	<i>Hustedia</i> sp. ....	VR
<i>Hustedia</i> sp. ....	C	<i>Limbella wolfcampensis</i> (R.E. King) .....	R
<i>Liosotella wordensis</i> (R.E. King) .....	C	<i>Meekella prionota</i> Cooper and Grant .....	R
<i>Meekella skenoides</i> Girty .....	R	<i>Orthotichia kozlowskii</i> R.E. King .....	R
<i>Neospirifer amphigyus</i> .....	VR	<i>Teguliferina boesei</i> R.E. King .....	C
<i>Paraspiriferina rotundata</i> Cooper and Grant .....	R	<i>Tropidelasma</i> sp. ....	VR
<i>Paucispinifera</i> sp. ....	R		

	Rarity code		Rarity code
LOCALITY N742d : Lenox Hills Formation		<i>Scapharina rugosa</i> Cooper and Grant .....	VR
<i>Reticulatia robusta</i> Cooper and Grant .....	VR	<i>Spiriferella sulcifer</i> (Shumard) .....	VR
LOCALITY N744 : Bone Spring Formation		<i>Spiriferellina nuda</i> Cooper and Grant .....	R
<i>Entelestes stehlii</i> Cooper and Grant .....	VR	<i>Thedusia trigonalis</i> (Girty) .....	R
LOCALITY N745 : Bone Spring Formation		<i>Thedusia ventricosa</i> Cooper and Grant .....	R
<i>Antronaria spectabilis</i> Cooper and Grant .....	VR	LOCALITY N748a : Capitan Formation	
<i>Chonetinella victoriana</i> (Girty) .....	VR	<i>Anteridocus swalloviaus</i> (Shumard) .....	VR
<i>Elliottella minima</i> (Stehli) .....	VR	<i>Bryorhynchus bisulcatum</i> (Shumard) .....	R
<i>Goniarina permiana</i> (Stehli) .....	R	<i>Dyoros</i> ( <i>Dyoros</i> ) <i>subliratus</i> (Girty) .....	VR
<i>Hustedia hessensis</i> R.E. King .....	VR	<i>Liosotella popei</i> (Shumard) .....	VR
<i>Kozlowskia kingi</i> Stehli .....	VR	<i>Micraphelia subalata</i> Cooper and Grant .....	R
<i>Meekella hessensis</i> R.E. King .....	VR	<i>Phrenophoria pinguis</i> (Girty) .....	VR
<i>Meekella intermedia</i> Cooper and Grant .....	VR	<i>Reticulariina</i> sp. ....	VR
<i>Pontisia nanas</i> (Stehli) .....	VR	<i>Sestropoma cribriferum</i> Cooper and Grant .....	R
<i>Rhipidomella hessensis</i> R.E. King .....	VR	<i>Stenoscisma</i> sp. ....	VR
LOCALITY N746 : Bone Spring Formation		<i>Thamnosia capitanensis</i> (Girty) .....	VR
<i>Acosarina dorsisulcata</i> Cooper and Grant .....	VR	LOCALITY N750 : Capitan Formation	
<i>Antronaria spectabilis</i> Cooper and Grant .....	VR	<i>Allorhynchus</i> sp. ....	VR
<i>Cancrinella</i> sp. ....	R	<i>Aneuthelasma amygdalinum</i> Cooper and Grant .....	R
<i>Chonetinella victoriana</i> (Girty) .....	R	<i>Anomaloria anomala</i> Cooper and Grant .....	R
<i>Cyclacantharia</i> sp. 3 .....	R	<i>Astegosauria subquadrata</i> (Girty) .....	A
<i>Derbyia</i> sp. ....	VR	<i>Cleiothyridina pilularis</i> Cooper and Grant .....	VR
<i>Dyoros</i> ( <i>Dyoros</i> ) <i>consanguineus</i> (Girty) .....	VR	<i>Compressopproductus pinniformis</i> (Girty) .....	A
<i>Elliottella multicostata</i> Cooper and Grant .....	C	<i>Dielasma</i> sp. ....	VR
<i>Entelestes stehlii</i> Cooper and Grant .....	R	<i>Dielasma subcirculare</i> Cooper and Grant .....	VR
<i>Heteralosia</i> sp. ....	VR	<i>Martinia rhomboidalis</i> Girty .....	C
<i>Hustedia glomerosa</i> Cooper and Grant .....	VR	<i>Ombonia guadalupensis</i> (Girty) .....	C
<i>Kozlowskia kingi</i> Stehli .....	C	<i>Paucispinifera latidorsata</i> (Girty) .....	R
<i>Limbella victorioensis</i> Stehli .....	VR	<i>Plectelasma guadalupense</i> (Girty) .....	VR
<i>Meekella intermedia</i> Cooper and Grant .....	R	<i>Plectelasma planidorsatum</i> Cooper and Grant .....	VR
<i>Quadrochonetes girtyi</i> Stehli .....	R	<i>Tropidelasma gregarium</i> (Girty) .....	VR
<i>Rhipidomella hessensis</i> R.E. King .....	VR	LOCALITY N750a : Capitan Formation	
<i>Scacchinella americana</i> Stehli .....	R	<i>Anteridocus swalloviaus</i> (Shumard) .....	C
<i>Spinifrons quadrata</i> Stehli .....	VR	<i>Collemataria</i> sp. ....	VR
<i>Teguliferina conida</i> (Stehli) .....	VR	<i>Composita emarginata</i> Girty .....	R
LOCALITY N747 : Bone Spring Formation, Cutoff		<i>Dielasma prolongatum</i> Girty .....	VR
Member		<i>Dyoros</i> ( <i>Dyoros</i> ) <i>subliratus</i> (Girty) .....	VR
<i>Composita nucella</i> Cooper and Grant .....	C	<i>Eliva inflata</i> Cooper and Grant .....	C
<i>Hustedia decollatensis</i> Cooper and Grant .....	VR	<i>Fascicosta longaeva</i> (Girty) .....	VR
<i>Megousia auriculata</i> Muir-Wood and Cooper .....	VR	<i>Grandaurispina</i> sp. 5 .....	VR
<i>Phrenophoria corpulenta</i> Cooper and Grant .....	VR	<i>Hustedia opsia</i> Cooper and Grant .....	VR
<i>Tautosia expansa</i> Cooper and Grant .....	R	<i>Liosotella popei</i> (Shumard) .....	R
LOCALITY N748 : Bell Canyon Formation, Pinery		<i>Paraspiriferina billingsi</i> (Shumard) .....	VR
Member		<i>Paucispinifera</i> sp. ....	R
<i>Altiplexus trapezoidalis</i> Cooper and Grant .....	R	<i>Reticulariina</i> sp. ....	VR
<i>Arionthia lamaria</i> Cooper and Grant .....	VR	<i>Scapharina levis</i> Cooper and Grant .....	VR
<i>Composita</i> sp. ....	R	<i>Stenoscisma trabeatum</i> Cooper and Grant .....	R
<i>Craspedona newelli</i> Cooper and Grant .....	VR	<i>Strigirhynchia transversa</i> Cooper and Grant .....	VR
<i>Crenispirifer jubatus</i> Cooper and Grant .....	VR	<i>Tautosia shumardiana</i> (Girty) .....	VR
<i>Derbyia</i> sp. ....	VR	<i>Thamnosia capitanensis</i> (Girty) .....	C
<i>Dielasma prolongatum</i> Girty .....	VR	LOCALITY N750b : Capitan Formation	
<i>Dielasma sulcatum</i> Girty .....	R	<i>Astegosauria subquadrata</i> (Girty) .....	R
<i>Elivina? annectans</i> Cooper and Grant .....	R	<i>Composita affinis</i> Girty .....	VR
<i>Glossothyropsis cryptacanthoides</i> Cooper and Grant .....	VR	<i>Compressopproductus pinniformis</i> (Girty) .....	VR
<i>Heterelasma shumardianum</i> Girty .....	VR	<i>Elivina compacta</i> (Girty) .....	VR
<i>Hustedia rupinata</i> Cooper and Grant .....	C	<i>Fascicosta longaeva</i> (Girty) .....	VR
<i>Metriolepis nabis</i> Cooper and Grant .....	VR	<i>Martinia rhomboidalis</i> Girty .....	VR
<i>Micraphelia subalata</i> Cooper and Grant .....	VR	<i>Megousia</i> sp. ....	R
<i>Paraspiriferina sapinea</i> Cooper and Grant .....	C	<i>Paraspiriferina billingsi</i> (Shumard) .....	R
<i>Plectelasma guadalupense</i> (Girty) .....	R	<i>Paucispinifera latidorsata</i> (Girty) .....	R
<i>Plectelasma</i> sp. ....	VR	<i>Stenoscisma trabeatum</i> Cooper and Grant .....	VR
<i>Sarganostega transversalis</i> Cooper and Grant .....	VR	<i>Strigirhynchia transversa</i> Cooper and Grant .....	VR
		<i>Tautosia shumardiana</i> (Girty) .....	VR

	Rarity code		Rarity code
LOCALITY N750e : Capitan Formation		<i>Paraspiriferina billingsi</i> (Shumard).....	VR
<i>Martinia rhomboidalis</i> Girty .....	VR	LOCALITY N750g : Capitan Formation	
<i>Plectelasma planidorsatum</i> Cooper and Grant .....	VR	<i>Plectelasma guadalupense</i> (Girty).....	VR
LOCALITY N750f : Capitan Formation			
<i>Astegosia subquadrata</i> (Girty) .....	VR		

TABLE 2.—Stratigraphic distribution of brachiopod species in Glass and Guadalupe mountains

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Acanthocrania																											
alta				-					X			-	-	-	-	-	-								-		-
conferta								-				-	-	-	X	-	-					X				-	-
densispina		-					-				-	X	-	X	-	-	-				-	-	-		-	-	-
intermedia		-		-								-	-	-	X	X	-	X			-	-	-				
magna		-	-	-	-	-						X	-	-	-	-	-					-					
minutispinosa	-	-	-	-	-	-						-	-	-	-	-	-					-	X	X	-		
platys	-	-	-	-	-	-		-	-	-		-	-	-	-	-	-				X	-	-	-	-		
regularis	-	-	-	-	-	-	-		-	-		-	-	-	-	-	-				-	-	-	-	X		
vasta	-	-	-	-	-	-	-		-	-		-	-	-	-	-	-				-	-	X	-	-	X	
Acolosia																											
?anomala	-	-	-	-	-	-	-	-	-		X	-	-	-	-	X		-			-	-	-				
elliptica	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-					-	-	-				
?exasperata	-	-	-	-	-	-	-	-	X	-		-	-	-	-	-					-	-	-				-
glabra	-	-	-	-	-	-	-	-	-	-		-	-	-	X	-	-	-			-	-	-	-			
magna	-	-	-	-	X	-	-	-	-	-		-	-	-	-	-	-	-			-	-	-	-			
recepta	-	-	-	-	-	-	-	-	X	-		-	-	-	-	-	-	-			-	-	-	-			
Acosarina																											
baylorensis (REK)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
dorsisulcata C&G	-	-	-	-	X	X	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
mesoplatys (REK)	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	X	-	-	-	-	-	
rectimarginata	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acritosia																											
magna C&G	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	
magnifica	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-			-	-	-	-	
peculiaris	-	-	-	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
silicica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X		-	-	-	-	-	
solida	-	-	-	-	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	-			-	-	-	-	
teguliferoides (REK)	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
?vestibula	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-			-	-	-	-	
Agelesia																											
triagonalis (REK)	-	-	-	-	-	-	-	X	-	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	
Allorhynchus																											
circulare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
concentricum	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
formulosum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
permianum permianum Stehli	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
permianum wordense	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	
triangulatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	
variable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	
venustum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-
Altiplecus																											
argutus			X		-	-	-	-	-	-			-												-	-	
cooperi Stehli				-	-	-	-	-	-	-			-									X			-	-	
?deltosus				-	-	-	-	-	-	-			-										X	X	X	-	
extensus				-	-	-	-	-	-	-			-										X	X	X	-	
glebosus				-	X	-	-		X	-			-													-	
periosus				-	-	-	-	-	-	-			-														X
trapezoidalis		-		-	-	-	-	-	-	-			-											X	X	-	
sp.				-	-	-	-	-	X	-		X		X	-	-	-	-	-	-	-						
Ametoria																											
residua					-	-	-	-	-					X	-	-	-	-	-	-	-		-	-	-	-	
Amphipella																											
arcaria C&G					-	-	-	-	-	-		X	-	-	-	-	-	-	-	-			-	-	-	-	
attenuata					-	-	-	-	-	-		-	-	X	-	-	-	-	-	-			-	-	-	-	
Anemonaria																											
sublaevis (REK)				-	-	-	-	-	-	-		X		X	-	-	-	-	-	-	X	-	-			-	
Aneuthelasma																											
amygdalinum								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		X	X
Anomalesia																											
perplexa					-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	



GENUS AND SPECIES	Captank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Anomaloria																											
anomala C&G .....	-	-	-	-			-			-	-	-	-					-	-	-	-	-			-	X	X
Anteridocus																											
bicostatus .....	-	-	-	-						-	-							-	-	-	X		X	X	-	X	-
erugatus .....	-	-	-	-						-	-	X		X					-	-					-	-	-
eximius .....	-	-	-	-						-	-								-	-	X				-	-	-
gongylus .....	-	-	-	-						-	-	X							-	-					-	-	-
paucicostatus .....	-	-	-	-				X	X	-	-								-	-					-	-	-
seminudus .....	-	-	-	-						-	-			X					-	-					-	-	-
subcarinatus .....	-	-	-	-						-	-								-	-			X	X		-	-
swallowianus (Shumard) .....	-	-	-	-						-	-								-	-			X	X	X	X	X
triangulatus .....	-	-	-	-						-	-			X					-	-					-	-	-
Antiquatonia																											
costella .....	-	-	-	X	-	-	-	-		-									-	-					-	-	-
hessensis (REK) .....					X				X	X									-	-					-	-	-
inflativentra .....	X	X	X	-	-	-	-	-	-	-	-								-	-					-	-	-
planumbona Stehli .....	-	-	-		-	-	-	-	-	-									-	-	X				-	-	-
regularis .....	-	-	-	X	-	-			-	-									-	-					-	-	-
Antronaria																											
dissona .....	-	-		-	X	-	-	X	X	-	-	-							-	-	X				-	-	-
emarginata .....	-	-		-	X			X	X	-	-	-							-	-					-	-	-
indentata .....	-	-		-	-	-				-	-	-							-	-	X				-	-	-
mesicostalis (Girty) .....	-	-		-	-	-			X	-	-	-							-	-	X				-	-	-
pluricosta .....	-	-		-	-	-		-	-	-	-	-							-	-	X				-	-	-
specialis .....	-	-		-	-	-				-	-	-							-	-	X				-	-	-
speciosa .....	-	-		-	-	-		X	-	X	X	X		X					-	-	-				-	-	-
spectabilis .....	-	-		-	-	-				-	-	-							-	-	X				-	-	-
titania .....	-	-		-	X	-	-	X	X	X	-	-							-	-	-				-	-	-
transversa (REK) .....	-	-		-	X	-	-	X	X	X	X	-							-	-	-				-	-	-
voluminosa .....	-	-		-	X	X	-	X	X	-	-	-							-	-	X				-	-	-
Aphaurosia																											
rotundata .....		-	-	-	-		-	-	-	-	-	-						-	-	-	-	-	-	X	X	-	-
scutata .....							-	-	-	-	-	-						-	-	-	-		X	X	-	X	-
Arionthia																											
alata .....	-	-		-					-	-	-	-						-	-				X	-	X	-	-
blothrhachis .....	-	-								-	-	-			X	X								-	-	-	-
germana .....	-	-								-	-	-					X	X						-	-	-	-
lamaria .....	-	-								-	-	-											X	X	X	X	X
polypleura (Girty) .....	-	-								-	-	-											X	X	X	X	
Astegosia																											
subquadrata (Girty) .....	-	-	-		-	-	-	-	-	-								-	-		-				X	X	X
Atelestegastus																											
marginatus .....	-	-	X	-	-		-	-	-	-	-	-						-	-	-	-				-	-	-
Attenuatella																											
texana Stehli .....	-	-		-			-		-		-							-	-	-	X				-	-	-
Beecheria																											
elliptica .....	-	-	X	-	-	-		-	-	-	-	-						-	-	-	-	-			-	-	-
expansa .....	-		X	X	-		-	-	-	-	-	-						-	-	-	-				-	-	-
Bothrionia																											
guadalupensis .....																											
nasuta .....	-														X	X	X										-
pulchra .....	-																										-
transversa .....	-															X	X	X									-
Bothrostegium																											
compactum .....	-													X													-
derbyoideum .....	-													X													-
pusillum .....	-													X													-
Bryorhynchus																											
bisulcatum (Shumard).....	-	-	-	-	-		-	-	-	-	-	-						-	-	-	-	X	X	X	X	X	X
gratiosum (Girty) .....	-	-	-	-			-	-	-	-	-	-						-	-	-	-	X	X	X	X		-
?nitidum (Girty) .....	-	-	-	-			-	-	-	-	-	-						-	-	-	X						-

GENUS AND SPECIES	Captank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Bryorhynchus (cont'd.)																											
plicatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
Cactosteges																											
anomalus .....	-			-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	X	-	-	-	-	-	-	-	
Calliprotonia																											
sp. ....	-		X	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	
Callispirina																											
rotunda .....	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	
Camarelasma																											
neali .....	-	-	X	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cancrinella																											
distorta .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
expansa .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
fragosa .....	-	-	-	-	-	-	-	X	X		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
parva .....	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
planumbona .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
sparsispinosa .....	-	-	-	-	-	-	-	X	-		-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
subquadrata .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	
sp. 1 .....	-	-	-	-	-	-	-	-	-		-	X		-	-	-	-	-	-	-	-	-	-	-	-	-	
Cartorhium																											
chelomatum .....	-	-	-	-	-	-	-	-	-		-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	
coristum .....	-	-	-	-	-	-	-	-	-		-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
latum (REK) .....	-	-	-	-	-	-	-	-	-		-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	
mexicanum (Shumard) .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	
orbiculatum .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	
retusum .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	X	X	-	-	-	X	-	-	-	-	
vidriense .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
zoyei .....	-	-	-	-	X	X	-	X	X		-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
Cenorhynchia																											
atmeta .....	-	-	-	-	-	-	-	-	-		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
camerata .....	-	-	X	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
fracida .....	-	-	-	-	-	-	-	-	-		-	-	-	-	X	X	X	X	-	-	-	X	-	-	-	-	
hebata .....	-	-	X	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
mitigata .....	-	-	-	-	-	-	-	-	-		X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
nasuta .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
parvula .....	-	-	-	-	-	-	-	-	-		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
pentagonalis .....	-	-	-	-	-	-	-	-	-		-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	
saginata .....	-	-	-	-	-	-	-	-	-		-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
transversa .....	-	-	-	-	-	-	-	-	-		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
triangulata .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
unicostata .....	-	-	-	-	-	-	-	-	-		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ventricosa .....	-	-	X	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chaeniorhynchus																											
inauris .....	-	-	-	-	-	-	-	-	-		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
salutare .....	-	-	-	-	-	-	-	-	-		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
transversum .....	-	-	-	-	-	-	-	-	-		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chelononia																											
neali .....	-	-	X	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
straminea .....	-	-	X	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Choanodus																											
anomalus .....	-	-	-	-	-	-	-	-	-		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
irregularis .....	-	-	-	-	-	-	-	X	-		-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	
perfectus .....	-	-	-	-	-	X	-	-	-		-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	
Chondronia																											
bella .....	-	-	-	-	-	-	-	-	-		-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	
ningula .....	-	-	-	-	-	-	X	-	X		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
obesa .....	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
ovalis .....	-	-	-	-	-	-	-	-	-		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
parva .....	-	-	-	-	X	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
rectimarginata .....	-	-	X	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Chonetinella																											
biplicata (REK) .....	-	-		-	-	-	-	-	X	-	X	-	-	-							X						
costellata .....	X	X	X	-	-	-	-	-	-	-	-	-	-	-							-						
crassiparva .....	-	-	X		-	-	-	-	-	-	-	-	-	-							-						
gerontica .....	-	-		-	-	-	-	-	-	-	-	-	-	X							-						
magna .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-							X						
parva .....	X	X		-	-	-	-	-	-	-	-	-	-	-							-						
spinolirata (REK) .....	-	-	X		-	-	-	-	-	-	-	-	-	-							-						
victoriana (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-							X						
Chonetinetes																											
angustisulcatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X							-						
reversus C&G .....	-	-		-	-	-	-	-	-	-	-	-	-	X							-						
varians .....	-	-		-	-	-	-	-	-	-	-	-	-	-							-		X	X	X	-	
Chonosteges																											
costellatus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X							-						
limbatus .....	-	-	-		-	X	-	X	X		X		-	-							-						
matutinus .....	-	-			X	-	-	-	-	-	-		-	-							-						
multicostatus .....	-	-			-	-	-	-	-	-	-	X		-							-						
pulcher .....	-	-	-	-	-	-	-	-	-	-	-	X	X	-							X						
variabilis .....	-	-	-	-	X	X	X	X	X	-	-	X	X	-							X						
Cleiothyridina																											
mulsa .....	-	-	-	-	-	-	-	-	X		-	-	-	-							-						
nana .....	-	-	-	-	-	-	-	-	-		-	-	-	X							-						
pilularis .....	-	-	-	-	-	-	-	-	-		-	-	-	-							-					X	X
rara .....	-	-	-	-	-	-	-	-	-		-	-	-	-		X					-					-	
rectimarginata .....	-	-	X		-	-	-	-	-		-	-	-	-		X					-					-	
Collemataria																											
americana (Girty) .....	-	-	-	-	-	-	-	-	-		-	-	-	-							X						
batilliformis .....	-	-	-	-							-	-	-	X							-						
elongata .....	-	-	-								-	-	-	-	X	X	X		X		-						
gregaria .....	-	-	-	-							-	X	-	X							-						
irregularis .....	-	-	-								-	X	X								-						
marshalli (Stehli) .....	-	-						X			-	-	-	-							X						
platys .....	-	-	-		X	-	-	X	X		-	-	-	-							-					X	X
spatulata .....	-	-	-		-	-		-	-		-	-	-	-							-		X				
Collumatus																											
solitarius C&G .....		-	-	-	-	-	-	-	-	-	-	-		X													
Composita																											
affinis Girty .....		-	-	-	-	-		-	-													-	-	X	X	X	X
apheles .....		-			X	X		X	X	X																	
apsidata .....	-	-						-	-		X		-								-						
bucculenta .....	-	-						X	-	X	X	X	X	X													
costata .....	-	-																									
cracens .....	-	-																		X	X						
crassa .....																											
discina .....	X	X		X	X	-			X		-	-	-	-													
emarginata Girty .....	-	-																									
enormis .....	-	-												X	X	X	X	X				X		X	X	X	X
imbricata .....	-	-										X															
mexicana (Hall) .....	-	-																		X							
nucella .....	-	-																			X						
parasulcata .....	-	-													X	X	X	X				X					
pilula .....	-	-												X													
prospera .....	-	-																				X					
pyriformis .....	-	-																					X	X	X	X	
quantilla .....	-	-												X													
stalagmium .....	-											X		X													
strongyle .....		X	X	X	-															X							
Compressoproducūs																											
acuminatus .....		-	-	-	-	-		-	-					X													
concentricus .....	-	-	-	-	X			-	X		X																
curtus .....	-	-						-	-			X															
flabellatus .....	-	-										X															
parvus .....	-	-			X	X	X	X	X																		
pinniformis (Girty) .....	-	-			-																						X

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Compressoproductus (Cont'd.)																											
rarus .....	-	-	-	-	-	-	-	-	-	-	-	X	X	-	X	-	X	-	X	-	-	-	-	-	-	-	
thomasi .....	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cooperina																											
inexpectata T,T,&P .....	-	-	-	-	-	-	-	-	-	-	X	X	X	-	X	X	X	X	X	-	-	X	X	-	-	-	
parva .....	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
subcuneata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
triangulata .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Coscinophora																											
hortoni (REK) .....	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
magnifica .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
monilifera .....	-	-	-	-	X	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
nodosa (C&S) .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Costispinifera																											
costata (REK) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	
rugatula (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	X	-	-	-	-	-	-	-	
walcottiana (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X?	-	-	-	-	
Craspedona																											
newelli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	
Crenispirifer																											
angulatus (REK) .....	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
effrenus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
jubatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	
myllus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	
sagus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
Crurithyris																											
guadalupensis (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	
inflata Stehli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
longirostris .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
major .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
minutalis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
sulcata Stehli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	
tholiaphor .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	
tumbilis .....	-	X	X	X	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	X	-	-	-	-	
Cryptacanthia																											
glabra .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
sinuata (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
sp. 1 .....	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ctenalosia																											
fixata C&S .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	X	-	-	-	X	X	-	-	-	
primitiva .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
rotunda .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
Cyclacantharia																											

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Derbyia (Cont'd.)																											
filosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	X	X	-	-	X	-	-	-	X	-
informis .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
laqueata .....	-	-	-	-	-	-	-	-	X	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
nasuta Girty .....	-	-	-	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
pannucia .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	X	-	-	-	-	-
profunda .....	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
scitula .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
strophomenoidea .....	-	-	X	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	X	X	X	X	X	-
texta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	X	X	X	X	X	-
Derbyoides																											
dunbari .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marathonensis .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sp. ....	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dielasma																											
adamanteum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-
a. angulatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
anterolatum .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bellulum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
compactum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	X	-	-	-	-	-
cordatum Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	X	-
diabloense Stehli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
ellipsoideum .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
emarginatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
expansum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
gracile .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-
hessense .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
labiatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
ligonorum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
longisulcatum .....	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
microrhynchum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
obesum .....	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
perplexum .....	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pictile .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
planidorsatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
prolongatum Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-
pygmaeum .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rigbyi .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
spatulatum Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X
subcirculare .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
subcylindricum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
sulcatum Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
uniplicatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-
zebratum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	-	-
Diplanus																											
apochordus .....	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
catatonus .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
lamellatus (REK) .....	-	-	-	-	X	X	-	X	X	-	X	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
rarus .....	-	-	-	-	X	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
redactus .....	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Divaricosta																											
squarrosa C&G .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-
vagabunda .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dyoros (Dyoros)																											
angulatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
attenuatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
consanguineus (Girty) .....	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
convexus .....	-	-	-	-	-	-	X	-	-	-	-	-	-	-	X	X	X	X	X	-	-	X	-	-	-	-	-
endospinus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
extensiformis .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
extensus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	X	-	-	-	-	-
hillanus (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
intrepidus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X
magnus (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
planixtensus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
robustus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
subliratus (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X
tenuis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-

GENUS AND SPECIES	Captank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Dyoros (Dyoros) (Cont'd.)																											
transversus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
vulgaris .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
Dyoros (Lissosia)																											
concavus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	X	-	-	X	-	-	-	-	
parvus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	X	-	-	-	-	-	-	-	-	
vagabundus .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	X	-	-	-	-	-	
Dyoros (Tetragonetes)																											
auriculatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
complanatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
giganteus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	X	-	-	-	-	
lateralis .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
planus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
quadrangulatus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
rectangulatus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-	-	-	-	-	
solidus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
strigosus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
subquadratus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
wordensis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	
Echinaria																											
cf. E. moorei (D&C) .....	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Echinauris																											
bella .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
cf. E. boulei (Koz) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
circularis .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
crassa .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
interrupta .....	-	-	X	X	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
irregularis .....	-	-	-	-	-	-	X	X	-	-	-	X	X	X	-	-	-	-	-	-	X	-	-	-	-	-	
lappacea .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
lateralis M-W&C .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	-	-	-	
liumbona .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	X	-	-	-	-	-	-	-	-	-	
parva .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
productelloides .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
subquadrata .....	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
venustula .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Echinosteges																											
guadalupensis (Shumard) ....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	
tuberculatus (REK) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	X	-	-	-	-	
sp. ....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ectoposia																											
grandis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	
wildei .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	
Edriosteges																											
beedei (REK) .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
compactus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
multispinosus M-W&C .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
tenuispinosus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Elassonia																											
micraria .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
petila .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
scitula .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sobrina .....	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Eliva																											
inflata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
shumardi .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	X	
Elivina																											
?annectans .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	
compacta (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
detecta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	
Elliottella																											
minima (Stehli) .....	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
multicostata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	



GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
<i>Elliottella</i> (Cont'd.)																											
<i>transversalis</i> (Stehli) .....	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>varicostata</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Enalloxia</i>																											
<i>rotundovata</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>Entelestes</i>																											
<i>costellatus</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
<i>densus</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
<i>dumblei</i> Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X?	-	-	-	-	-	-	
<i>exiguus</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
<i>leonardensis</i> REK .....	-	-	-	-	-	-	-	-	X	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>plummeri</i> REK .....	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>rotundobes</i> .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>stehlii</i> .....	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>subcircularis</i> .....	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>subnodus</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	
<i>wolfcampensis</i> REK .....	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	
<i>wordensis</i> REK .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	X	-	-	-	-	-	-	-	
<i>Eolyttonia</i>																											
<i>catilla</i> .....	-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>chaotica</i> .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
<i>circularis</i> .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>cornucopia</i> .....	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>diabloensis</i> (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>fredericksi</i> (REK) .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>gigantea</i> .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>parviconica</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
<i>phialiforma</i> .....	-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>pocillata</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	-	-	
<i>progressa</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Eridmatus</i>																											
<i>marathonensis</i> .....	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Fascicosta</i>																											
<i>bella</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	X	-	
<i>elongata</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	
<i>longaeva</i> (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	
<i>Fimbrinia</i>																											
<i>ovata</i> .....	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>plummeri</i> (RHK) .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Geyerella</i>																											
<i>americana</i> Girty .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	
<i>hessi</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>inexpectata</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
<i>kingorum</i> .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>sp. 1</i> .....	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Glossothyropsis</i>																											
<i>carinata</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	
<i>cryptacanthoides</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	
<i>immatura</i> .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>juvenis</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	
<i>polita</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	
<i>rectangulata</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	
<i>robusta</i> (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-	
<i>superba</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Glyptosteges</i>																											
<i>angustus</i> (REK) .....	-	-	-	-	X	X	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>insculptus</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>intricatus</i> .....	-	-	-	-	X	-	X	X	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>sulcatus</i> .....	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Goniarina</i>																											
<i>appeli</i> .....	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>diabloensis</i> .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
<i>futilis</i> .....	-	-	-	-	X	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	

[illegible]

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Hustedia (Cont'd.)																											
bipartita Girty .....	-	-	-	-	-	X	X	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
catella .....	-	-	-	-	X	X	-	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
cepacea .....	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
citeria .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
compressa .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
connorsii .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
consuta .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
crepax .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
culcitula .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
cuneata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
decollatensis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
demissa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	
glomerosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
hapala .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
hessensis REK .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
huecoensis REK .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
inconspicua .....	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
lusca .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
narinosa .....	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
opsia .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	
pugilla hebetata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	X	X	X	X	
p. nasiterna .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	X	X	-	-	-	-	-	-	-	
p. pluscula .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	
p. pugilla .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	
rupinata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	
samiata .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	X	X	X	-	-	
sculptilis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	
spicata .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
stataria .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
tomea .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
trisecta .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
trita leptyca .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
t. trita .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hypopsia																											
versuta .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hystriculina																											
convexa .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
dugoutensis (REK) .....	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
minima .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pumila .....	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sulcata .....	X	X	X	X	-	-	-	-	-	X?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ventroplana .....	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Institella																											
leonardensis (REK) .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	X	-	-	-	-	-	
Iotina																											
minuta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
Isogramma																											
concevum .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
diabloense .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
lobatum .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
vidriense .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Juresania																											
sp. 1 .....	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 2 .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 3 .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kochiproductus																											
elongatus .....	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
occidentalis (REK) .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
primitivus .....	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
quadratus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
victorioensis (REK) .....	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
sp. 1 .....	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 2 .....	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 6 .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Kozlowskia																											
alata .....	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
anterosulcata .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
kingi Stehli .....	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
nasuta .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
subsphaeroidalis .....	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kutorginella																											
dartoni (REK) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
robusta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
sullivanensis (REK) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
uddeni .....	X	X	X	X	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
umbonata (M-W&C) .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
Lamellosia																											
lamellosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
Leiorhynchoidea																											
amygdaloidea .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	
rotundidorsa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
scelesta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	
Lepidocrania																											
sparsispinosa .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sublamellosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	X	-	-	-	-	
tardispinosa .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
Lepidospirifer																											
angulatus C&G .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
costellus (REK) .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
demissus .....	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
inferus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. ....	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Leurosina																											
delicata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
lata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	-	-	-	
marginata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	
serratoseptata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
sinesulca (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
vulgarica .....	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
Limbella																											
costellata .....	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
limbata .....	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
victorioensis Stehli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
wolfcampensis (REK) .....	-	X	X	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 1 .....	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Linoproductus																											
angustus REK .....	-	-	-	-	X	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
delicatus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
meniscus D&C .....	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
nasutus REK .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
semisulcatus .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
undatus .....	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 1 .....	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Liosotella																											
costata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
irregularis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	X	X	-	-	-	-	-	-	-	
opima (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
parva .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	
popei (Shumard) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
rotunda .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	
spinumbona .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
tetragonalis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	
wordensis (REK) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	X	-	-	-	-	
Liraria																											
lirata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
Lirellaria																											
costellata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

GENUS AND SPECIES	Capitan	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Lirellaria (Cont'd.)																											
crassa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-
diabloensis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
Lissochonetes																											
parvisulcatus .....	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lowenstamia																											
ampla .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sp. 1 .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loxophragmus																											
ellipticus .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Madarosia																											
anterolamellata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-
pentagona .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Martinia																											
causaria .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
cruenta .....	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
exigua .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
fucina .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
miranda .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nealranchensis .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rhomboidalis Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X
wolfcampensis REK .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meekella																											
angustiplicata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
attenuata Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
calathica .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-
caperata .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
circularis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
enormis .....	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hessensis REK .....	-	-	-	-	X	X	X	X	X	X	X	-	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
intermedia .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
magnifica .....	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
occidentalis (Newberry) .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
prionota .....	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
skenoides Girty .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	X	X	X	-	-	-
texana REK .....	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Megousia																											
auriculata M-W&C .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-	-	-	-	-	-
definita .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	X	-	-	-	-	-
flexuosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
mucronata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	X	-	-	-	-	-	-	-	-
umbonata .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
?waageniana (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Mesolobus																											
?permianus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
Metriolepis																											
carotica .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
diabloensis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
exserta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
irenae (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
larina .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
nabis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-
pedicosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-
pineae .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-
pulvinata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-
scrupea .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
regulata .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
ziczac .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
Micraphelia																											
pumilis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
scitula C&G .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-
subalata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	X

[illegible]



GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Paranorella (Cont'd.)																											
sp. 5 .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 6 .....	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Paraspiriferina																											
amoena .....	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
billingsi (Shumard) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	
b. retusa (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
cellulana .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
evax (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
laqueata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	X	-	-	-	-	-	-	-	
paginata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
pulchra .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
rotundata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	
sapinea .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	X	X	X	
setulosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
Parenteleles																											
cooperi REK .....	X	X	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
superbus .....	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Paucispinifera																											
auriculata M-W&C .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	
costellata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
indentata (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
intermedia .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	X	-	-	-	-	-	-	-	
latidorsata (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	
magnispina .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	
parasulcata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
quadrata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	
rara .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
rectangulata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	
spinosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	
sulcata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
suspecta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	
transversa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	
tumida .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
Peniculauris																											
costata .....	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
imitata .....	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
peniculifera .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
subcostata (REK) .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
transversa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 1 .....	-	-	-	-	X	X	X	X	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Petasmaia																											
expansa C&G .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sp. 1 .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
Petasmatherus																											
depressus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
mundus .....	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
nitidus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
opulus C&G .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	X	-	-	-	-	
pumilus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
pusillus (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
recticardianatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
Petrocrania																											
diabloensis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
exasperata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	
septifera .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	
teretis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	
Phrenophoria																											
anterocostata .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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irregularis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Phrenophoria (Cont'd.)																											
nesiotes .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
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pentagonalis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
perplexa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pinguiformis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-
pinguis (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	X
planifrons .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
planiventra .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
repugnans .....	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
subcarinata C&G .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-
ventricosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
vetula .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plectelasma																											
dubium .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
guadalupense (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	X
kingi C&G .....	-	-	-	-	-	X	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nitidum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
planidorsatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X
Pleurelasma																											
costatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Poikilosakos																											
informis .....	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
Polymorpharia																											
polymorpha .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-	-
Pontisia																											
costata .....	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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longicosta (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
magnicostata .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nanas (Stehli) .....	-	-	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
parva .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
stehlii stehlii C&G .....	-	-	-	-	-	-	-	X	-	-	X	-	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-
s. tumidosa .....	-	-	-	-	-	-	-	-	-	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
truncata .....	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ventricola .....	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
wolfcampensis .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudodielasma																											
brilli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
gibberum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
globulum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
lobatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
magnum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-
minor (REK) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
ovatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-
pingue .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
pinyonense .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	X	X	-	X	-
plicatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
scutulatum (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
subcirculare .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	X
sulcatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Pseudoleptodus																											
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conicus .....	-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cucullatus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
getawayensis Stehli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
?giganteus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
grandis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-
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guadalupensis (Stehli) ....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X
lepidus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
nodosus .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
primitivus .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psilocamara																											
hesperia .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[illegible]

[illegible]

GENUS AND SPECIES	Gaptank	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Spinifrons																											
delicatula .....	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
magna .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
quadrata Stehli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Spiriferella																											
calcarata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	
clypeata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	
embrithes .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
gloverae .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
gravis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	
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propria .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	X	X	X	X	
sulcifer (Shumard) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Spiriferellina																											
hilli (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	
nasuta .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	
nuda .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	X	X	X	-	
paucicostata .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	X	-	-	-	-	-	-	-	-	
tricolor .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
vescula .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
Spiriferinaella																											
limata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	
medialis .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
scalpata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	X	X	-	-	-	-	-	-	-	-	
sp. ....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	
Spuriosa																											
circularis .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
Spyridiophora																											
compacta .....	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
distincta C&S .....	-	-	X	-	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
reticulata (REK) .....	-	-	-	-	-	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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Stenosisma																											
abbreviatum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
aberrans .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	
amoenum .....	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
aptatum .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
bellatulum .....	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
bonum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
calvatum .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
camurum .....	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	X	-	-	-	-	
doricranum .....	-	-	-	-	-	-	-	-	X	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
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fabarium .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
hadrum .....	-	-	-	-	X	X	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
hueconianum (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
inaequale (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
kalum Stehli .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
levicostum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
maniculum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	
multicostum Stehli .....	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
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oblisum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	
pansum .....	-	-	-	-	X	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
peneleve .....	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
problematicum .....	-	-	-	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pyraustoides .....	-	-	-	-	X	-	-	-	X	-	X	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	
renode .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	
repigratum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	
trabeatum .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	X	X	
triquetrum .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Striatifera																											
linoproductiformis .....	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Strigirhynchia																											
elongata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	

GENUS AND SPECIES	Capitan	Uddenites	Neal Ranch	Lenox Hills	Decie Ranch	Poplar Tank	Dugout Mtn.	Sullivan Peak	Skinner Ranch undivided	Hess	Taylor Ranch	Cathedral Mtn.	Wedin	Road Canyon	China Tank	Willis Ranch	Lens	Appel Ranch	Word undivided	Hueco	Bone Spring	Getaway	Hegler	Pinery	Rader	Lamar	Capitan
Strigirhynchia (Cont'd.)																											
indentata (Shumard) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X
transversa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Strophalosia																											
inexpectans .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Sulcataria																											
?compacta .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
latisulcata .....	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sp. ....	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taphroestria																											
expansa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
peculiaris .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
?sp. ....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tautosia																											
angulata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
distorta .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
elegans (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X
fastigiata C&G .....	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
galbina .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
lenumbona (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
magnisepta (Stehli) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
podistra .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pulchra .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
shumardiana (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	X	X	X	X	X	X
transenna .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	X	-	-	-	-	-
Teguliferina																											
armata (Girty) .....	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
boesei REK .....	X	X	X	X	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
compacta .....	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
conida (Stehli) .....	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
solidispinosa .....	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Texarina																											
elongata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	-	-	X	-	-	-	-	-
oblongata C&G .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-
parallela .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
paucula .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
solita .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
wordensis (REK) .....	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
Thamnosia																											
anterospinosa C&G .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
capitanensis (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X
parvispinosa (Stehli) .....	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
phragmophora .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	X	-	-	-	-	-	-	-	-	-
silicica .....	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Theodusia																											
angustata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-
biconvexa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bucrenata .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-
dischides .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
discissa .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
emarginata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
magna .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
mesocostata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
paucicostata .....	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
procera .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-
trigonalis (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-
ventricosa .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-
Timorina																											
attenuata .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	X
ovata (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X
schuchertensis (Girty) .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X
Torynechus																											
alectorius .....	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



[illegible]

TABLE 3.—Stratigraphic distribution of brachiopod species in the Cibolo Formation of the Chinati Mountains

GENUS AND SPECIES	Transition	Breccia	Spicule	Thin-bedded (lower)	Thin-bedded (upper)	GENUS AND SPECIES	Transition	Breccia	Spicule	Thin-bedded (lower)	Thin-bedded (upper)
<i>Acosarina dorsisulcata</i> C&G .....	-	X	-	-	-	<i>H. cf. H. cuneata</i> .....	-	-	-	X	-
<i>A. mesoplatys</i> (REK) .....	-	X	X	-	X	<i>H. hessensis</i> REK .....	X	-	-	-	-
<i>A. sp.</i> .....	-	X	-	-	-	<i>Institella leonardensis</i> (REK) .....	-	-	X	-	-
<i>Acritosia silicica</i> .....	-	X	-	-	-	<i>Kozlowskia alata</i> .....	-	X	-	-	-
<i>A. teguliferoides</i> (REK) .....	-	X	X	-	-	<i>Limbella limbata</i> .....	-	X	X	-	-
<i>Anemonaria sublaevis</i> (REK) .....	-	-	X	-	-	<i>Liosotella costata</i> .....	-	-	-	X	-
<i>Antronaria dissona</i> .....	-	X	-	-	-	<i>Meekella attenuata</i> Girty .....	-	X	-	-	-
<i>A. mesicostalis</i> (Girty) .....	-	X	-	-	-	<i>M. caperata</i> .....	-	X	-	-	-
<i>Cenorhynchia saginata</i> .....	-	-	-	-	X	<i>M. magnifica</i> .....	X	X	-	-	-
<i>Choanodus irregularis</i> .....	-	-	X	-	-	<i>M. prionota</i> .....	-	X	-	-	-
<i>Chonetinella ciboloensis</i> .....	-	X	-	-	-	<i>Megousia auriculata</i> M-W&C .....	-	-	X	-	X
<i>Chonosteges pulcher</i> .....	-	-	X	-	-	<i>Metriolepis carotica</i> .....	-	-	X	-	-
<i>Cleiothyridina rectimarginata</i> .....	-	X	-	-	-	<i>Neophricadothyris cordata</i> .....	-	-	-	-	X
<i>Collemataria americana</i> (Girty) .....	-	X	-	-	-	<i>Nudauris whitei</i> .....	X	-	-	-	-
<i>Composita crassa</i> .....	-	X	-	-	-	<i>Orthotichia irregularis</i> .....	-	X	-	-	-
<i>C. sp.</i> .....	-	X	X	-	X	<i>O. cf. O. newelli</i> .....	X	X	-	-	-
<i>Crenispirifer angulatus</i> (REK) .....	-	X	-	-	-	<i>Paraspiriferina cellulana</i> .....	-	-	-	-	X
<i>Derbyia crenulata</i> Girty .....	-	X	-	-	-	<i>Paucispinifera</i> sp. ....	-	-	-	-	X
<i>D. aff. D. nasuta</i> Girty .....	-	X	-	-	-	<i>Petasmatherus pumilus</i> .....	-	-	-	-	X
<i>D. sp.</i> .....	-	X	X	-	-	<i>Phrenophoria</i> sp. ....	-	-	-	-	X
<i>Dielasma longisulcatum</i> .....	-	X	-	-	-	<i>Pontisia robusta</i> .....	-	X	-	-	-
<i>Diplanus rarus</i> .....	-	X	X	-	-	<i>Reticulariina bufala</i> .....	-	-	-	-	X
<i>Dyoros (Dyoros) magnus</i> (Stehli) .....	-	X	-	-	-	<i>Reticulatia robusta</i> .....	X	-	-	-	-
<i>D. (D.) transversus</i> .....	-	-	-	-	X	<i>Rhammaria</i> sp. ....	-	-	X	X	X
<i>Echinauris bella</i> .....	-	-	-	-	X	<i>Rhipidomella hessensis</i> REK .....	X	X	X	-	-
<i>E. sp.</i> .....	-	X	X	X	-	<i>R. hispidula</i> .....	-	-	X	-	-
<i>Elliotella</i> cf. <i>E. varicostata</i> .....	-	X	-	-	-	<i>Scacchinella titan</i> .....	X	X	-	-	-
<i>Enteleles wolfcampensis</i> REK .....	-	X	-	-	-	<i>Stenosisma multicostum</i> Stehli .....	X	X	-	-	-
<i>E. sp. indet.</i> .....	X	X	X	-	-	<i>S. problematicum</i> .....	-	X	-	-	-
<i>Eolyttonia gigantea</i> .....	-	X	-	-	-	<i>S. sp. (small)</i> .....	-	-	-	-	X
<i>Geyerella</i> cf. <i>G. hessi</i> .....	-	X	-	-	-	<i>Teguliferina conida</i> (Stehli) .....	-	X	-	-	-
<i>Gypospirifer infraplicus</i> (REK) .....	-	X	-	-	-	<i>Tropidelasma robertsi</i> .....	-	X	-	-	-
<i>Heterelasma</i> sp. ....	-	-	-	X	-	<i>Xenosteges adherens</i> M-W&C .....	-	-	X	-	-
<i>Hustedia consuta</i> .....	-	-	-	X	-	<i>Xestesia schucherti</i> (REK) .....	-	-	X	-	-

## Ammonites

### Identifications by William M. Furnish and Brian F. Glenister

At the outset of the Glass Mountains work, ammonites were sent to Dr. A. K. Miller at the University of Iowa. He determined the presence of *Perrinites* in the First Limestone Member of the Word [now Road Canyon Formation] near the site of the Old World Ranch (Miller, 1945a) and insisted on the Leonardian age of this original Word member. After Miller's untimely death, Dr. William M. Furnish and later also his colleague Dr. Brian F. Glenister kindly helped us with ammonite identifications and age assignments based on them. They were especially helpful in separating Pennsylvanian (Gaptank Formation) beds from Permian rocks in places where separation was difficult. They collected with us in the field on a number of occasions. As with the fusulinids, brachiopod and ammonite age assignments are not always in accord, a result of the variation in evolving rates

of different phyla. We thank Furnish and Glenister for their generous help. Comments and annotations by them accompany the ammonite lists. The localities are those designated by the National Museum of Natural History (formerly the United States National Museum) and are described in Part I, pages 136-165, or herein in "Corrigenda" under "Additions to Localities."

700e. *Boesites texanus* (Böse)  
*Dunbarites rectilaterale* (Miller)  
*Kargalites parkeri* (Heilprin)  
*Neopronorites boesei* (Smith)  
*Neoshumardites gaptankensis* (Miller)  
*Prothalassoceras kingorum* (Miller)  
*Prouddenites primus* Miller  
*Schistoceras hyatti* Smith?  
*Uddenites schucherti* Böse

[This fauna represents one of the more important ammonoid assemblages of West Texas. It was first described in 1930 by A. K. Miller, and can be correlated with similar forms of the Missourian Series in the Midcontinent Region.]

700m. *Bamyaniceras knighti* (Miller and Furnish)

*Eumedlicottia whitneyi* (Böse)

*Perrinites* sp.

*Pseudovidrioceras dunbari* (Miller and Furnish)

[Collections from this locality are representative of the Skinner Ranch Formation in the Dugout Mountain Area. Collectively, the assemblage is fairly distinctive for that part of the section originally designated as lower Leonard. Specimens of *Perrinites* are distinguished by only moderate size (about 50 mm diameter) and differ slightly from those of the Cathedral Mountain Formation in having a more primitive suture.]

700n. *Bamyaniceras knighti* (Miller and Furnish)

*Metalegoceras* sp.

*Perrinites* sp.

700o. *Bamyaniceras knighti* (Miller and Furnish)

700r. *Bamyauiceras knighti* (Miller and Furnish)

*Perrinites* sp.

700s. *Bamyaniceras knighti* (Miller and Furnish)

*Perrinites* sp.

700t. *Bamyaniceras knighti* (Miller and Furnish)

*Eothinites hessensis* Miller and Furnish

*Perrinites* sp.

701. *Almites sellardsi* (Plummer and Scott)

*Artinskia artiensis* (Grünewaldt)

*Eoasianites deciensis* (Plummer and Scott)

*Neopronorites bakeri* Miller and Furnish

[This collection is in the sequence of ammonoid faunas of West Texas. It is regarded as definitely Permian, rather than Pennsylvanian, but cannot be assigned exactly within the Lower Permian on the basis of the known ammonoids. *Properrinites bakeri* (Plummer and Scott) is the usual index for the Neal Ranch Formation.]

701c. *Agathiceras uralicum* (Karpinsky)

*Almites sellardsi* (Plummer and Scott)

*Eoasianites* cf. *E. modestus* (Böse)

*Prothalassoceras* cf. *P. welleri* Böse

701e. *Schistoceras hyatti* Smith

701f. *Marathonites ganti* (Smith)?

701g. *Agathiceras uralicum* (Karpinsky)

701h. *Agathiceras* cf. *A. uralicum* (Karpinsky)

701k. *Agathiceras uralicum* (Karpinsky)

*Almites sellardsi* (Plummer and Scott)

*Eoasianites* cf. *E. modestus* (Böse)

*Properrinites bakeri* (Plummer and Scott)

*Prothalassoceras welleri* Böse

701-l. *Agathiceras* sp.

*Boesites* sp.

*Eoasianites* sp.

*Marathonites* sp.

*Schistoceras* sp.

*Uddenites?* sp.

[Abundant small silicified ammonoids occur at this locality. Although poorly preserved, generic assignments are considered to be reliable. The assemblage of genera is that found in the Gaptank Formation, below the Neal Ranch. This material is therefore assumed to be reworked or from a carbonate erratic in the limestone ledge.]

701m. *Properrinites bakeri* (Plummer and Scott)

701n. *Almites sellardsi* (Plummer and Scott)

*Properrinites* cf. *P. bakeri* (Plummer and Scott)

701o. *Agathiceras* sp.

*Almites sellardsi* (Plummer and Scott)

701p. *Agathiceras ciscoense* Smith

*Boesites texanus* (Böse)

*Dunbarites* sp.

*Emilites incertum* (Böse)

*Eoasianites modestus* (Böse)

*Kargalites parkeri* (Heilprin)

*Marathonites ganti* (Smith)

*Neodimorphoceras* sp.

*Neopronorites boesei* (Smith)?

*Schistoceras hyatti* Smith

*Uddenites schucherti* Böse

*Vidrioceras uddeni* Böse

[Ammonoids from this locality were described by Böse in 1917 and this collection constitutes topotypes of several generotypes.]

701q. *Eoasianites modestus* (Böse)

*Marathonites ganti* (Smith)

*Neopronorites boesei* (Smith)

*Schistoceras hyatti* Smith

701r. *Boesites texanus* (Böse)

*Eoasianites modestus* (Böse)

*Eothalassoceras?* sp.

*Marathonites ganti* (Smith)

*Neodimorphoceras lenticulare* Ruzhencev?

*Parashumardites senex* (Miller and Cline)?

*Schistoceras hyatti* Smith

*Stenopronorites* sp.

*Uddenoceras oweni* (Miller and Furnish)

[This collection contains abundant, well-preserved ammonoids. The locality is approximately equivalent to that providing specimens for the study by Smith in 1929.]

701s. *Marathonites* sp.

*Schistoceras* sp.

701t. *Schistoceras* sp.

701v. *Marathonites* sp.

*Neopronorites* sp.

*Schistoceras* sp.

- 701w. *Agathiceras ciscoense* Smith
- 701y. *Schistoceras* sp.
- 701z. *Almites sellardsi* (Plummer and Scott)  
*Properrinites bakeri* (Plummer and Scott)
702. *Agathiceras uralicum* (Karpinsky)  
*Clinolobus* n. sp.  
*Neocrinites newelli* (Miller and Furnish)  
*Perrinites hilli* (Smith) sensu lato  
*Pseudogastricercatid* [immature]
- 702a. *Stacheoceras rothi* Miller and Furnish
- 702b. *Perrinites* sp.
- 702c. *Glossoceras normani* (Miller and Furnish)  
*Paraceltites?* sp.  
*Perrinites* sp.
- 702d. [Immature multilobed ammonoid, probably *Stacheoceras*]
- 702e. *Perrinites hilli* (Smith) sensu lato
- 702t. *Almites?* sp.
703. *Agathiceras* sp.  
*Eumedlicottia whitneyi* (Böse)  
*Glossoceras normani* (Miller and Furnish)  
*Neocrinites* sp.  
*Paraceltites* sp.  
*Perrinites hilli* (Smith) sensu stricto  
*Propinacoceras* sp.  
*Pseudogastricercas cooperi* Miller
- [The assemblage of ammonoids from this locality was described by Miller and Furnish in 1940, then in more detail by Miller in 1945, and by Miller and Furnish in 1957. The fauna is representative of the Roadian Stage in the type area.]
- 703a. [Immature pseudogastricercatid]  
*Perrinites* sp.
- 703b. *Perrinites* sp.
- 703bs. *Pseudovidrioceras* sp.
- 705c. *Kargalites hargisi* (Böse)
- 705d. *Kargalites hargisi* (Böse)
- 705e. *Kargalites?* sp.
- 705g. *Properrinites bakeri* (Plummer and Scott)
706. *Altudoceras altudense* (Böse)
- 706b. *Agathiceras girtyi* Böse
- 706c. *Altudoceras altudense* (Böse)  
*Tauroceras bowmani* (Böse)
- 706e. *Atsabites multiliratus* (Plummer and Scott)  
*Eumedlicottia burckhardtii* (Böse)  
*Pseudogastricercas roadense* (Böse)
- 706f. *Neocrinites* sp. [immature]
- 706x. *Almites sellardsi* (Plummer and Scott)  
*Artinskia artiensis* (Grünewaldt)  
*Kargalites* cf. *K. subquadratum* (Plummer and Scott)  
*Properrinites bakeri* (Plummer and Scott)
- 706y. *Agathiceras uralicum* (Karpinsky)  
*Crinites* new species
- 707a. *Agathiceras* sp.  
*Almites* sp.  
*Perrinites subcumminsi* (Haniel)
- 707d. *Neocrinites newelli* (Miller and Furnish)
- 707e. *Glossoceras?* sp. [small globular ammonoids]  
*Peritrochia erebus* Girty?  
*Perrinites hilli* (Smith) sensu stricto  
*Propinacoceras* sp.  
*Pseudogastricercas cooperi* Miller?
- 707g. *Metalegoceras schucherti?* Miller and Furnish
- 707j. *Akmilleria adkinsi* (Plummer and Scott)  
*Artinskia artiensis* (Grünewaldt)  
*Daraelites kingi* Plummer and Scott  
*Eoasianites deciensis* (Plummer and Scott)  
*Kargalites subquadratum* (Plummer and Scott)  
*Properrinites bakeri* (Plummer and Scott)  
*Prothalassoceras welleri* Böse
- 707k. *Perrinites subcumminsi* (Haniel)?
- 707m. *Agathiceras uralicum* (Karpinsky)  
*Crinites* sp.  
*Properrinites boesei* (Plummer and Scott)  
*Prostacheoceras* sp.
- 707n. *Agathiceras uralicum* (Karpinsky)  
*Artinskia artiensis* (Grünewaldt)  
*Eoasianites deciensis* (Plummer and Scott)  
*Properrinites denhami* Miller and Furnish
- 707o. *Agathiceras uralicum* (Karpinsky)  
*Almites sellardsi* (Plummer and Scott)
- 707p. *Akmilleria adkinsi* (Plummer and Scott)  
*Eoasianites deciensis* (Plummer and Scott)  
*Eoasianites* cf. *E. modestus* (Böse)  
*Properrinites bakeri* (Plummer and Scott)  
*Prothalassoceras welleri* Böse
- 707q. *Paragastricercas* new species  
*Perrinites hilli* (Smith)
- 707v. *Metalegoceras* sp.
- 707w. *Kargalites?* sp.
- 708e. *Almites sellardsi* (Plummer and Scott)  
*Perrinites subcumminsi* (Haniel)
- 708q. *Properrinites cumminsi* (White)
- 709h. *Perrinites subcumminsi* (Haniel)
- 709o. *Neocrinites newelli* (Miller and Furnish)  
*Perrinites hilli* (Smith)

- 709t. *Kargalites subquadratum* (Plummer and Scott)
- 709u. *Agathiceras uralicum* (Karpinsky)
- 710g. *Bamyaniceras* cf. *B. knighti* (Miller and Furnish)  
*Perrinites hilli* (Smith)
- 710h. [Immature paragastriceratids]
- 710r. *Bamyaniceras* cf. *B. knighti* (Miller and Furnish)
- 711d. *Kargalites* sp.
- 711q. *Neocrimites* sp.  
*Perrinites hilli* (Smith)
- 711r. *Perrinites hilli* (Smith)
- 713p. *Perrinites hilli* (Smith)
- 713y. *Almites sellardsi* (Plummer and Scott)
715. *Agathiceras uralicum* (Karpinsky)  
*Almites sellardsi* (Plummer and Scott)  
*Artinskia artiensis* (Grünewaldt)  
*Crimites glomulus?* Ruzhencev  
*Daraelites kingi* Plummer and Scott  
*Metalegoceras colemanense* Plummer and Scott  
*Neopronorites bakeri* Miller and Furnish  
*Properrinites bakeri* (Plummer and Scott)  
*P. denhami* Miller and Furnish  
*P.* new species  
*Propopanoceras postsimense* Ruzhencev  
*Prostacheoceras* new species  
*Prothalassoceras welleri* Böse  
*Svetlanoceras* sp.
- [The ammonoids from this locality represent the best assemblage of upper Wolfcamp species. Except for the representatives of *Properrinites*, there are close counterparts in the upper Sakmarian Series of the southern Ural Mountains.]
- 715b. *Almites sellardsi* (Plummer and Scott)  
*Properrinites bakeri* (Plummer and Scott)
- 715v. *Metalegoceras colemanense* Plummer and Scott
- 716n. *Perrinites subcumminsii* (Haniel)
- 718g. *Perrinites* sp.
- 719x. *Pseudovidrioceras* sp.
- 720d. *Agathiceras* sp.  
*Neocrimites?* sp.  
*Pseudogastriceras?* sp.
- 720e. *Agathiceras uralicum* (Karpinsky)
- 720f. *Bamyaniceras knighti* (Miller and Furnish)  
*Perrinites* sp.
- 721j. *Agathiceras* sp.  
*Eumedlicottia burckhardti* Böse  
*Neocrimites* new species  
*Paracelites elegans* Girty  
*Pseudogastriceras roadense* (Böse)
- 721r. *Waagenoceras dieneri* Böse
- 721s. [On the basis of the two small but well-preserved ammonoids from this locality, it is preferred to regard the source as Word Formation rather than Road Canyon. The description states that the fossils came from above Road Canyon Limestone, and the block could even have been derived from higher on the slope. There is no uncertainty about the identification of the species, a characteristic element found in the three lower members of the Word in the Glass Mountains. Except for this possible occurrence, we have not been able to verify *Waagenoceras* in the Road Canyon Formation; a similar appearing related globular ammonoid, *Glassoceras*, does occur, though, at that level.]
- 721u. *Bamyaniceras knighti* (Miller and Furnish)  
*Eumedlicottia* sp.  
*Perrinites hilli* (Smith)
- 721v. *Perrinites hilli* (Smith)
- 721x. *Perrinites hilli* (Smith)
- 722e. *Eumedlicottia* sp.
- 722i. *Almites* sp.  
*Neocrimites* sp.  
*Perrinites* sp.
- 722m. *Stacheoceras rothi* Miller and Furnish [immature]
- 722u. [Unidentified cyclolobid]
- 723o. *Eothinites hessensis* Miller and Furnish  
*Eumedlicottia whitneyi* (Böse)  
*Neocrimites* sp.  
*Perrinites* sp.  
*Pseudogastriceras* sp.  
*Pseudovidrioceras?* sp.  
*Thalassoceras* sp.
- 723w. *Agathiceras* sp.  
*Altudoceras altudense* (Böse)  
*Eumedlicottia burckhardti* (Böse)  
*Neocrimites defordi* (Miller and Furnish)  
*Popanoceras* cf. *P. bowmani* (Böse)  
*Waagenoceras* cf. *W. dieneri* Böse
- 723y. *Eumedlicottia whitneyi* (Böse)  
*Neocrimites newelli* (Miller and Furnish)  
*Perrinites hilli* (Smith)
- 724f. *Eumedlicottia* sp.  
*Neocrimites defordi* (Miller and Furnish)  
*Pseudogastriceras* sp.
- 724g. *Neocrimites defordi* (Miller and Furnish)  
*Waagenoceras* cf. *W. dieneri* Böse
- 724u. *Eumedlicottia* sp.
- 725f. *Timorites* sp. [immature]  
*Waagenoceras?* sp.
- 725m. [Immature cyclolobid]

- 726c. *Eumedlicottia whitneyi* Böse  
*Perrinites hilli* (Smith)
- 726f. *Pseudogastricercatid* [indeterminate]
- 726m. *Kargalites* new species
- 726n. *Crimites* sp. [immature]  
*Stacheoceras* sp.
- 726o. *Perrinites hilli* (Smith)  
*Pseudohalorites* new species
- 727d. *Boesites* sp.  
*Daixites* cf. *D. meglitskyi* Ruzhencev
- 727m. *Eothinites hesseusis* Miller and Furnish
- 727n. *Banyanicerias knighti* (Miller and Furnish)  
*Perrinites* sp.  
*Pseudovidrioceras dunbari* (Miller and Furnish)
- 727v. *Banyanicerias knighti* (Miller and Furnish)  
*Perrinites* sp.
- 727w. *Banyanicerias knighti* (Miller and Furnish)
- 728e. *Medlicottia* sp.
- 728h. *Agathiceras* sp.
- 730e. *Perrinites hilli* (Smith)
- 730f. *Perrinites hilli* (Smith)
- 730g. *Perrinites hilli* (Smith)
- 730i. *Perrinites hilli* (Smith)
- 730j. *Banyanicerias knighti* (Miller and Furnish)  
*Perrinites hilli* (Smith)—sensu lato
- 730k. *Aluinites* sp.  
*Banyanicerias knighti* (Miller and Furnish)  
*Neocrimites* sp. [fusiform]  
*Perrinites* sp.
- 730w. *Popauoceras* sp.  
*Waagenoceras* sp.
731. *Mexioceras guadalupense* (Girty)  
*Timorites* sp.
- 731s. *Neocrimites newelli* (Miller and Furnish)  
*Perrinites subcumminsi* (Haniel)
- 731u. *Waagenoceras* sp.
- 732a. *Altudoceras altudense* (Böse)  
*Cibolites uddeni* Plummer and Scott  
*?Mexioceras guadalupense* (Girty)  
*?Timorites uddeni* Miller and Furnish
- 732c. *Waagenoceras* sp.
- 732j. *Agathiceras uralicum* (Karpinsky)
- 732-l. *Perrinites hilli* (Smith)
- 732s. *Eumedlicottia* sp.
- 732u. *Eumedlicottia whitneyi* (Böse)  
*Perrinites hilli* (Smith)  
*Prostacheoceras* sp.
- 732y. *Eumedlicottia* sp.  
*Paraceltites elegans* Girty
- 732z. *Agathiceras uralicum* (Karpinsky)  
*Epithalassoceras* new species  
*Eumedlicottia whitneyi* (Böse)?  
*Glassoceras normani* (Miller and Furnish)  
*Paraceltites elegans* Girty  
*Peritrochia erebus* Girty  
*?Propinacoceras* sp.  
*Pseudogastricercas cooperi* Miller?  
*Texoceras texanum* (Girty)
- [This locality, discovered by Cooper and Grant about 1965, has been the source of the largest collection of Permian ammonoids in West Texas. It is also a critical locality in that it combines faunal elements from the basin with those normally found on the shelf and is believed to provide a basis for detailed correlation from the Glass Mountains to the Guadalupe.]
- 733f. *Agathiceras* sp.  
*Paraceltites* sp.
- 733t. *Agathiceras* sp.  
*Eumedlicottia* sp.  
*Paraceltites* sp.  
*Pseudogastricercas* sp.  
*Stacheoceras* sp.
- 734c. *Perrinites* cf. *P. hilli* (Smith)
- 736d. *Perrinites hilli* (Smith)
- 736h. *Perrinites hilli* (Smith)
- 736j. *Pseudogastricercas* sp.  
*Waagenoceras* sp.
- 736r. *Perrinites hilli* (Smith) sensu stricto
- 736v. *Agathiceras* cf. *A. uralicum* (Karpinsky)
- 736w. *Waagenoceras* sp.
- 737b. *Pseudogastricercas roadeuse* (Böse)?  
*Waagenoceras* sp.
- 737c. *Agathiceras uralicum* (Karpinsky)  
*Paraceltites elegans* Girty
- 737g. *Agathiceras uralicum* (Karpinsky)  
*Paraceltites elegans* Girty
- 737j. *Banyanicerias smile* (Haniel)  
*Perrinites subcumminsi* (Haniel)
- 737n. *Agathiceras uralicum* (Karpinsky)  
*Paraceltites elegans* Girty
- 737r. *Agathiceras* sp.  
*Paraceltites elegans* Girty
- 737s. *Perrinites hilli* (Smith)



- 737t. *Daixites* sp.  
*Emilites incertus* (Böse)  
*Kargalites parkeri* (Heilprin)  
*Metapronorites pseudotrimorensis* (Miller)  
*Prouddenites primus* Miller  
*Schistoceras* sp.
- 737u. ?*Almites sellardsi* (Plummer and Scott)  
*Aristoceras appressum* Ruzhencev  
*Eoasianites subhanieli* Ruzhencev
- 737z. *Agathiceras girtyi* Böse  
 ?*Popanoceras bowmani* Böse

- 738c. *Medlicottia chozaensis* Plummer and Scott
- 738h. *Perrinites* sp.
- 738o. *Perrinites hilli* (Smith)
- 739d. *Agathiceras uralicum* (Karpinsky)  
*Epithalassoceras* new species
- 740n. *Strigogoniatis fountaini* Miller and Furnish

[The only diagnostic ammonoids found within the more massive carbonate of the Capitan reef front are the same as those known from the Lamar Limestone in the Patterson Hills in the basin facies.]

## Fusulinids

### Identifications by Garner L. Wilde

In 1957 we asked Garner Wilde to identify a modest number of fusulinid samples for us. He obligingly did so. In the subsequent years, up to 1971, we took advantage of his willingness to help us, which resulted in an enormous amount of information from the 279 samples that he examined. We also had several conferences in the field with him. We believe that his contribution to the paleontology and stratigraphy of the Glass Mountains should be recorded.

In addition to the identifications listed we have included his comments on localities in which there appeared some doubt as to age. An example is locality 723w, the samples from which were labeled "First Limestone Member of the Word" because that was the geological map designation for that locality. Wilde (as did also Furnish and Glenister with reference to ammonites) recognized the locality as an exposure of the "Third Limestone Member of the Word" (= Willis Ranch Member), a discovery that had a far reaching effect on the understanding of the Gilliland Canyon area. The localities are those designated by the National Museum of Natural History (formerly a part of the United States National Museum) and are described in Part I, pages 136-165, or herein in "Corrigenda" under "Additions to Localities."

We must express here our appreciation and thanks for the enormous amount of work performed by Garner Wilde in our behalf. He was especially helpful in locating the base of the Wolfcamp in the

Lenox Hills. The differences of opinion reflected in the contrast of his stratigraphic analysis with our designations for USNM localities result from reliance on different groups of animals whose stages of evolution are not totally parallel.

- 700a. *Triticites newelli* Burma  
*T. aff. T. primarius* Merchant and Keroher  
 [Both of the above species occur in the Stanton limestone of the Lansing group in Kansas and are typical Missourian forms. The form identified above as *T. aff. T. primarius* is probably an undescribed species, but I related it to that species to give an idea of the type of thing we are dealing with.]
- 700g. *Triticites* sp. [Virgilian]
- 700q. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner  
*P. cf. P. sullivanensis* Ross  
*Reichelina?* sp.
- 700v. *Parafusulina deliciosensis* Dunbar and Skinner  
*P. rothi* Dunbar and Skinner  
*P. spp.*  
 [Word Number 2 (= China Tank Member) or slightly higher. I doubt that this could be as old as Road Canyon.]
- 700w. *Parafusulina rothi* Dunbar and Skinner  
*P. sullivanensis* Ross  
 [Again this may be slightly younger than Road Canyon (see locality 700v).]
- 700z. *Parafusulina deltoides* Ross  
*P. spissisepta* Ross  
 [This looks a little younger than most Skinner Ranch (Sullivan Peak) that we have seen, but could be.]
701. *Triticites* cf. *T. creekensis* Thompson  
*T. meeki* (Moller)  
*T. ventricosus* (Meek and Hayden)

- 701a. *Schwagerina* sp.  
*Triticites creekensis* Thompson?
- 701b. *Schwagerina* sp.  
*Triticites creekensis* Thompson
- 702d. *Parafusulina* spp. .  
[One form may be *Parafusulina brooksensis* Ross; one is similar to, but smaller than, *Parafusulina leonardensis* Ross.]
- 703g. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner  
*S. guembeli pseudoregularis* Dunbar and Skinner
- 703h. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner
- 703i. *Schwagerina guembeli* Dunbar and Skinner  
*Staffella* sp.
- 703j. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner  
*Staffella* sp.
- 703n. *Schwagerina* aff. *S. huecoensis* (Dunbar and Skinner)  
*S. cf. S. neolata* Thompson  
*S.?* sp. [similar to some lower McCloud forms]  
[This again looks like a typical Wolfcampian fauna, and not too different in age from 705m, perhaps a little older.]
- 705m. *Ozawainella* sp.  
*Pseudoschwagerina* sp.  
*P. uddeni* (Beede and Kniker)  
*Schwagerina diversiformis* Dunbar and Skinner  
*S. neolata* Thompson  
[This occurrence of *Schwagerina neolata* in the Glass Mountains section fits very nicely, for Thompson's types came from the middle Hueco limestone in the Hueco Mountains. *Schwagerina diversiformis* was also reported by Thompson from the Hueco limestone, but higher in the section.]
- 706b. *Parafusulina* sp. [similar in development to *P. boesei attenuata*]  
*Rauserella?* sp.
- 706d. *Parafusulina* sp. [elongate, very slender, highly evolved form]
- 706f. *Parafusulina* sp.  
*P. cf. P. attenuata* Dunbar and Skinner  
*Rauserella* sp.
707. *Schwagerina dugoutensis* Ross
- 707a. *Ozawainella?* sp.  
*Schubertella melonica* Dunbar and Skinner  
*S. kingi* Dunbar and Skinner  
*Schwagerina dugoutensis* Ross  
*S. hawkinsi* Dunbar and Skinner  
*S. hessensis* Dunbar and Skinner  
*S. sp.* [with heavy axial fillings]
- 707c. *Parafusulina boesei* Dunbar and Skinner  
*P. attenuata* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner
- 708e. *Parafusulina spissisepta* Ross
- 708q. *Paraschwagerina plena* Ross?  
*Schwagerina* sp.  
[Reworked fusulines?]
- 709c. *Parafusulina* cf. *P. bakeri* Dunbar and Skinner  
*P. cf. P. attenuata* Dunbar and Skinner  
*Rauserella* sp.
- 709d. "*Eoschubertella*" sp.  
*Schwagerina tersa* Ross
- 709e. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli pseudoregularis* Dunbar and Skinner
- 709f. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 709g. *Schwagerina crassitectoria* Dunbar and Skinner
- 709h. *Schwagerina guembeli pseudoregularis* Dunbar and Skinner
- 709i. *Parafusulina allisonensis* Ross  
*P. brooksensis* Ross  
*Staffella lacunosa* Dunbar and Skinner
- 709j. *Parafusulina allisonensis* Ross?
- 709k. *Parafusulina brooksensis* Ross?  
*Staffella* sp.
- 709m. *Parafusulina brooksensis* Ross?  
*Staffella* sp.  
[Contains same algae as 716h.]
- 709p. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 709q. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 709r. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 709s. *Paraschwagerina* sp.  
*Pseudoschwagerina* sp.  
*Schubertella* sp.
- 709v. *Monodiexodina linearis* (Dunbar and Skinner)  
*Schubertella* sp.
- 709w. *Monodiexodina linearis* (Dunbar and Skinner)  
*Schwagerina* spp.
- 709x. *Paraschwagerina* sp.  
*Schubertella* sp.  
*Schwagerina* sp.
- 710i. *Parafusulina* cf. *P. attenuata* Dunbar and Skinner  
*P. cf. P. fountaini* Dunbar and Skinner  
*P. sp.*  
[These forms are generally larger and more advanced looking than those of 709c and 718k.]

- 710j. *Parafusulina boesei attenuata* Dunbar and Skinner  
*P. cf. P. fountaini* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner
- 710-l. *Parafusulina boesei* Dunbar and Skinner  
*P. attenuata* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner  
*P. sp.*  
*Rauserella* sp. [common]  
*Schubertella* sp.? [massive chomata]
- 710m. *Parafusulina* cf. *P. boesei attenuata* Dunbar and Skinner  
*P. sp.*
- 710n. *Parafusulina* cf. *P. boesei* Dunbar and Skinner  
*P. cf. P. attenuata* Dunbar and Skinner  
*Rauserella* sp. [rare]
- 710o. *Parafusulina* cf. *P. boesei* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner  
*P. sp.*
- 710p. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner  
*Rauserella* new species [abundant]
- 710s. *Schubertella* sp.  
*Schwagerina* aff. *S. dispansa* Ross  
*S. sp.*
- 710t. *Parafusulina* cf. *P. attenuata* Dunbar and Skinner  
*P. cf. P. boesei* Dunbar and Skinner
- 710w. *Pseudoschwagerina gerontica* Dunbar and Skinner  
*Schwagerina* sp.
- 710x. *Schwagerina* cf. *S. dugoutensis* Ross  
*S. cf. S. hessensis* Dunbar and Skinner
- 711c. *Paraschwagerina* sp.  
*Schubertella* sp.  
*Schwagerina* cf. *S. thompsoni* Needham  
*S. spp.*  
*Stewartina* cf. *S. laxissima* Dunbar and Skinner
- 711d. *Parafusulina allisonensis* Ross?
- 711e. *Pseudoschwagerina* sp.  
*Schwagerina* cf. *S. diversiformis* Dunbar and Skinner
- 711f. *Schwagerina?* sp. [may be close to *Chalaroschwagerina nelsoni* Dunbar and Skinner]  
*Staffella* sp.
- 711g. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina* sp.  
*Schwagerina* spp.
- 711h. *Chalaroschwagerina nelsoni* Dunbar and Skinner?  
*Paraschwagerina* sp.  
*Schubertella kingi* Dunbar and Skinner
- 711-l. *Schwagerina hawkinsi* Dunbar and Skinner  
*S. sp.*
- 711m. *Monodiexodina linearis* (Dunbar and Skinner)  
*Pseudoschwagerina* sp.  
*Schwagerina* spp.
- 711n. *Schubertella* cf. *S. kingi* Dunbar and Skinner  
*Schwagerina* spp.  
*Staffella* sp.
- 711s. *Parafusulina attenuata* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner  
*Rauserella* sp.
- 711u. *Parafusulina sellardsi* Dunbar and Skinner  
*P. spp.*
- 711v. *Parafusulina* cf. *P. attenuata* Dunbar and Skinner  
*P. spp.*  
*Rauserella* sp.
- 711w. *Parafusulina* cf. *P. boesei* Dunbar and Skinner  
*P. spp.*
- 711x. *Paraschwagerina* sp.  
*Pseudoschwagerina* sp.  
*Schubertella* sp.  
*Staffella* sp.
- 711y. *Schubertella melonica* Dunbar and Skinner  
*Schwagerina* sp.
- 712p. *Nankinella huecoensis* (Dunbar and Skinner)  
*Pseudoschwagerina* sp.  
*Schwagerina knighti* Dunbar and Skinner?  
*S. spp.*  
*Staffella* sp.
- 712q. *Parafusulina attenuata* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner  
*P. spp.* [large]
- 712u. *Nankinella huecoensis* (Dunbar and Skinner)  
*Schwagerina knighti* Dunbar and Skinner  
*S. sp.*
- 712v. *Nankinella huecoensis* (Dunbar and Skinner)  
*Paraschwagerina* sp.  
*Pseudoschwagerina gerontica* Dunbar and Skinner  
*Schwagerina knighti* Dunbar and Skinner  
*S. sp.*
- 712x. *Paraschwagerina* sp.  
*Schwagerina* spp.
- 712y. *Pseudofusulina* sp., sensu stricto  
*Pseudoschwagerina* sp.  
*Schwagerina* sp.
- 714a. *Schwagerina diversiformis* Dunbar and Skinner
- 714b. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella laucunosa* Dunbar and Skinner
- 714c. *Pseudoschwagerina gerontica* Dunbar and Skinner  
*P. texana* Dunbar and Skinner  
*P. sp.*  
*Schubertella* sp.  
*Schwagerina cribrisepta* Ross  
*S. dispansa* Ross

- 714d. *Schubertella* aff. *S. melonica* Dunbar and Skinner  
*Schwagerina* sp.?
- 714f. *Pseudoschwagerina* sp.  
*Schwagerina* spp.
- 714g. *Pseudoschwagerina gerontica* Dunbar and Skinner  
*Stewartina laxissima* Dunbar and Skinner
- 714h. *Ozawainella?* sp.  
*Schwagerina crassitectoria* Dunbar and Skinner
- 714i. *Parafusulina vidriensis* Ross
- 714j. *Parafusulina* aff. *P. spissisepta* Ross
- 714k. *Parafusulina leonardensis* Ross
- 714s. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 714t. *Schwagerina* sp. [vaguely similar to *S. dugoutensis* Ross, but not that form]
- 714u. *Parafusulina allisonensis* Ross [or *P. leonardensis* Ross]  
*Schubertella* sp.
- 714v. *Endothyra* sp.  
*Parafusulina bakeri* Dunbar and Skinner?  
*P.* sp.  
*Rauserella* sp.
715. *Nankinella huecoensis* (Dunbar and Skinner)  
*Pseudoschwagerina gerontica* Dunbar and Skinner  
*P.* sp.  
*Schwagerina complexa* Thompson
- 715b. *Nankinella huecoensis* (Dunbar and Skinner)  
*Pseudoschwagerina uddeni* (Beede and Kniker)  
*Pseudofusulina* spp., sensu stricto  
*Schwagerina emaciata* Dunbar and Skinner  
*S. pugunculus* Ross  
*S.* new species?  
*Staffella* sp.
- 715c. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 715i. *Parafusulina* sp. [very close to 706d]
- 715k. *Schubertella* cf. *S. melonica* Dunbar and Skinner  
*Schwagerina hawkinsi* Dunbar and Skinner  
*S. hessensis* Dunbar and Skinner  
*S.* spp.
- 715r. *Chalartoschwagerina nelsoni* Dunbar and Skinner  
*Paraschwagerina?* sp.  
*Pseudoschwagerina* sp.  
*Schubertella* sp.  
*Schwagerina pugunculus* Ross
- 715t. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 715v. *Monodiexodina linearis* (Dunbar and Skinner)  
*Pseudoschwagerina* sp.  
*Schwagerina* aff. *S. hawkinsi* Dunbar and Skinner
- 716a. *Ozawainella?* sp.  
*Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner
- 716b. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli pseudoregularis* Dunbar and Skinner
- 716c. *Schwagerina guembeli pseudoregularis* Dunbar and Skinner
- 716d. *Schwagerina crassitectoria* Dunbar and Skinner
- 716e. *Schwagerina crassitectoria* (Dunbar and Skinner)  
*Staffella lacunosa* Dunbar and Skinner
- 716f. *Parafusulina allisonensis* Ross
- 716h. *Parafusulina allisonensis* Ross?  
*P. deltoides* Ross?
- 716i. *Triticites* spp. [Pennsylvanian-Virgilian]
- 716m. *Schwagerina* sp.  
*Triticites creekensis* Thompson  
*T. pinguis* Dunbar and Skinner
- 716r. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina* sp.  
*Schwagerina knighti* Dunbar and Skinner  
*S.* cf. *S. hawkinsi* Dunbar and Skinner
- 716u. *Nankinella huecoensis* (Dunbar and Skinner)  
*Pseudoschwagerina gerontica* Dunbar and Skinner  
*Paraschwagerina* sp.  
*Schwagerina dispansa* Ross  
*S.* sp.
- 716w. *Parafusulina boesei* Dunbar and Skinner  
*P.* spp.
- 716y. *Nankinella huecoensis* (Dunbar and Skinner)  
*Paraschwagerina* sp. B?  
*Pseudoreichelina* sp.  
*Schwagerina hessensis* Dunbar and Skinner?
- 717b. *Parafusulina attenuata* Dunbar and Skinner  
*Rauserella* new species
- 717c. *Pseudoschwagerina convexa* Thompson?  
*P.* sp.  
*Schwagerina* sp.
- 718k. *Parafusulina boesei* Dunbar and Skinner  
*P.* cf. *P. bakeri* Dunbar and Skinner  
*P.* sp.
- 718-l. *Parafusulina rothi* Dunbar and Skinner  
*P.* sp.
- 718n. *Monodiexodina linearis* (Dunbar and Skinner)  
*Nankinella huecoensis* (Dunbar and Skinner)  
*Paraschwagerina* sp.  
*Schwagerina* sp.
- 718o. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina* sp.  
*Pseudoschwagerina* sp.  
*Schwagerina* sp.

- 718p. *Paraschwagerina* sp.  
*Schwagerina*? sp.
- 718r. *Pseudoschwagerina* spp.  
*Schwagerina* spp.  
*Triticites* sp.
- 718t. *Schwagerina hawkinsi* Dunbar and Skinner  
*S. hessensis* Dunbar and Skinner
- 718u. *Parafusulina allisonensis* Ross?
- 720e. *Schwagerina* sp. [somewhat similar to *S. dispansa* Ross]  
*S. crassitectoria* Dunbar and Skinner  
*S. sp.*  
*Schubertella melonica* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner  
[I believe this is younger than Decie Ranch.]
- 720h. *Schwagerina* ex. gr. *S. crassitectoria* Dunbar and Skinner
- 720i. *Schubertella* sp.  
*Schwagerina* sp.
- 720j. *Schubertella* sp.  
*Schwagerina* sp.
- 720k. *Schubertella* sp.  
*Schwagerina* sp.
- 720-l. *Nankinella huecoensis* (Dunbar and Skinner)  
*Pseudoschwagerina texana* Dunbar and Skinner  
*P. uddeni* Dunbar and Skinner  
*Schwagerina* spp.
- 720m. *Nankinella* sp.  
*Staffella* sp.
- 720n. *Oketaella*? sp.  
*Schwagerina* sp.
- 720o. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner
- 720p. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner
- 720q. *Nankinella* sp.  
*Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner  
*S. sp.*  
*Staffella lacunosa* Dunbar and Skinner
- 720r. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. sp.*  
*Staffella* sp.
- 720s. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner
- 720t. *Parafusulina* cf. *P. deltoides* Ross
- 720n. *Ozawainella* sp.  
*Parafusulina* cf. *P. deltoides* Ross  
*Staffella* sp.
- 720v. *Monodiexodina linearis* (Dunbar and Skinner)  
*Schwagerina* cf. *S. dispansa* Ross var. 2  
*Staffella* sp.
- 720w. *Schubertella* sp.  
*Schwagerina* spp.
- 720y. *Paraschwagerina* sp.  
*Pseudoschwagerina* sp. [ex. gr. *P. convexa* Thompson]  
*Schubertella* sp.  
*Schwagerina* sp.
- 720z. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina* sp.  
*Pseudoschwagerina*? sp.  
*Schubertella kingi* Dunbar and Skinner  
*Schwagerina extumida* Ross  
[This is not Gaptank. Could this be the large slide block on the southeast nose of Leonard Mountain?]
- 721c. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina* sp. [large]  
*Schwagerina* sp.
- 721d. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina* spp.  
*Schubertella kingi* Dunbar and Skinner  
*S. sp.*
- 721e. *Monodiexodina linearis* (Dunbar and Skinner)  
*Schubertella* sp.  
*Schwagerina* cf. *S. extumida* Ross
- 721qc. *Parafusulina* aff. *P. splendens* Dunbar and Skinner  
*P. n. sp.*
- 722h. *Parafusulina* cf. *P. allisonensis* Ross  
*Schubertella* [Ross called this *S. muelleriedi* Thompson and Miller]
- 722m. *Parafusulina leonardensis* Ross  
*Schubertella* sp.  
*Schwagerina dugoutensis* Ross
- 722r. *Monodiexodina*? sp.  
*Schwagerina* sp.
- 722y. *Parafusulina*? sp.  
*Schwagerina* sp. [very poor material]
- 722z. *Parafusulina*? *leonardensis* Ross  
*Schubertella* sp. [same as Ross referred to *S. muelleriedi* Thompson and Miller]  
*Schwagerina* sp.
- 723f. *Parafusulina* spp. [all new]
- 723g. *Schubertella* sp.  
*Schwagerina* sp.  
[This poses a problem. I would tentatively assign it to Wolfcampian-2 (Lenox Hills), while recognizing that it might be low Leonardian.]
- 723j. *Parafusulina*? spp.  
[These resemble species of the *Schwagerina hawkinsi-hessensis* group, but seemingly have a better development of incipient cuniculi.]

- 723-l. *Schubertella melonica* Dunbar and Skinner  
*Schwagerina* spp. [similar to those of 723j but not the same.]
- 723s. *Parafusulina allisonensis* Ross  
*P. cf. P. leonardensis* Ross
- 723t. *Parafusulina kingorum* Dunbar and Skinner  
*P. sp.*  
 [The types come from Word Limestone Number 4 (your Appel Ranch Member). I do not see how this can possibly be as old as Road Canyon (mapped as First Limestone of the Word = Road Canyon).]
- 723w. *Parafusulina rothi* Dunbar and Skinner  
*P. sellardsi* Dunbar and Skinner  
*P. spp.* [beautiful undescribed species, some of which resemble *P. sellardsi*]  
*P. wildei* Ross  
*Rauserella* sp.  
 [In addition to the above, J. W. Skinner (letter of 26 Nov 1963) identified *Parafusulina boesei* Dunbar and Skinner and *Parafusulina sullivanensis* Ross. I don't believe this material is as old as Road Canyon, and it might be (Word) Limestone 3.] [This bed was originally mapped as First Limestone Member of the Word = Road Canyon Formation) but actually is Willis Ranch Member—GAC]
- 724b. *Parafusulina attenuata* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner
- 724c. *Parafusulina rothi* Dunbar and Skinner  
*P. sp.*  
*P. splendens* Dunbar and Skinner?
- 724d. *Parafusulina rothi* Dunbar and Skinner  
*P. sullivanensis* Ross
- 724e. *Parafusulina sullivanensis* Ross
- 724h. *Parafusulina boesei* Dunbar and Skinner  
*P. cf. P. sullivanensis* Ross
- 724o. *Paraschwagerina* sp.  
*Schubertella* sp.  
*Schwagerina* spp. [Sierra Diablo type]  
*Staffella* sp.  
 [This ought to be Lenox Hills rather than Skinner Ranch; *Monodiexodina linearis* assemblage-zone.]
- 724v. *Paraschwagerina plena* Ross  
*Schwagerina dispansa* Ross
- 724w. *Chalaroschwagerina uelsoni opima* Dunbar and Skinner  
*Schwagerina dispansa* Ross?
- 724x. *Paraschwagerina plena* Ross  
*P. sp.*  
*Schwagerina dispansa* Ross  
*Triticites* sp. [reworked?]  
 [This could not be Skinner Ranch.]
- 724y. *Parafusulina deliciosensis* Dunbar and Skinner  
*P. sellardsi* Dunbar and Skinner
- 724z. *Parafusulina* cf. *P. wordensis* Dunbar and Skinner  
*P. sp.*
- 725a. *Schwagerina* spp.  
 [Wolfcampian (= Lenox Hills) and probably very close to 723g.]
- 725c. *Schwagerina* sp.  
*Stewartina laxissima* (Dunbar and Skinner)  
*Triticites?* sp.  
 [This is not Bone Spring as supposed, but Late Wolfcampian Hueco.]
- 725q. *Parafusulina* cf. *P. boesei* Dunbar and Skinner  
 [Very few sections for study, but this appears to be about Road Canyon.]
- 725u. *Parafusulina boesei* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner  
*Rauserella* sp.  
 [About Road Canyon.]
- 726c. *Parafusulina sullivanensis* Ross  
 [J. W. Skinner (letter of 26 Nov 1963) identified *Parafusulina boesei* Dunbar and Skinner and *P. wildei* Ross in addition to *P. sullivanensis*—GAC]
- 726g. *Parafusulina deltoides* Ross  
 [This might be as old as Skinner Ranch.]
- 726i. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina plena* Ross  
*Schwagerina extumida* Ross
- 726k. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner  
 [Assemblage-zone of *S. crassitectoria*.]
- 726u. *Parafusulina?* sp. [large, elongate]  
*Schubertella melonica* Dunbar and Skinner [abundant]
- 726q. *Parafusulina lineata* Dunbar and Skinner  
*P. n. sp.* [extremely thin walls]  
*Rauserella* sp.  
*Skinnerina* cf. *S. typicalis* Ross
- 726y. *Parafusulina leonardensis* Ross?  
*Schubertella* sp.
- 727c. *Schwagerina* cf. *S. longissimoidea* (Beede)  
*Triticites subventricosus* Dunbar and Skinner
- 727d. *Schwagerina emaciata* (Beede)  
*S. sp.*  
*Triticites pinguis* Dunbar and Skinner  
*T. sp.*
- 727h. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner  
*Parafusulina* cf. *P. allisonensis* Ross



- 727k. *Parafusulina leonardensis* Ross  
*Schubertella* sp.  
 [Should be Leonard Number 1 Limestone (= Sullivan Peak Member).]
- 727-l. *Parafusulina leonardensis* Ross?  
*Schubertella melonica* Dunbar and Skinner  
*S. sp.*  
 [All have been rolled about and redeposited: Leonard Number 1 Limestone or slightly higher.]
- 727q. *Parafusulina* sp.  
*Schubertella melonica* Dunbar and Skinner  
*S. sp.*  
 [Leonard Number 1 Limestone or slightly higher.]
- 727s. *Parafusulina* aff. *P. durhami* Thompson [probably a new species]
- 727t. *Parafusulina* cf. *P. leonardensis* Ross  
*Pseudoreichelina* sp.  
*Schwagerina dugoutensis* Ross
- 727y. *Schwagerina crassitectoria* Dunbar and Skinner  
*Staffella lacunosa* Dunbar and Skinner  
 [This cannot be Lenox Hills, but is Skinner Ranch equivalent.]
- 727z. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner  
 [Not Lenox Hills.]
- 728m. *Chalaroschwagerina nelsoni* (Dunbar and Skinner)  
*Pseudoschwagerina convexa* Thompson  
*Schwagerina* cf. *S. diversiformis* Dunbar and Skinner  
 [some resemble *S. wildei* Stewart]  
*S. sp.*  
 [Assemblage-zone of *Monodiexodina linearis*. Late Wolfcampian, Lenox Hills equivalent.]
- 728n. *Schubertella* aff. *S. melonica* Dunbar and Skinner  
*Schwagerina* spp.  
 [Some schwagerinas resemble *S. diversiformis* Dunbar and Skinner; others resemble some elongate species just below Leonard Number 1 Limestone (= Sullivan Peak Member) in the Lenox Hills. I would suggest a Skinner Ranch equivalent.]
- 728o. *Eoparafusulina* spp.  
*Schwagerina* sp.  
 [Assemblage zone of *S. crassitectoria*.]
- 729a. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner
- 729b. *Parafusulina* sp. [axial filling to poles]  
*Schwagerina* cf. *S. hawkinsi* Dunbar and Skinner  
 [Should be higher than Lenox Hills.]
- 730-l. *Schubertella melonica* Dunbar and Skinner  
*Schwagerina* aff. *S. hawkinsi* Dunbar and Skinner  
*S. aff. S. hessensis* Dunbar and Skinner
- 730o. *Parafusulina* sp.  
*Schubertella melonica* Dunbar and Skinner
- 730p. *Parafusulina* [large, elongate, with axial filling similar to *P. brooksensis* Ross]
- 730r. *Schwagerina* cf. *S. hawkinsi* Dunbar and Skinner  
*S. cf. S. hessensis* Dunbar and Skinner  
*S. spp.*
- 730t. *Parafusulina* spp.? [in detrital limestone with abundant *Tubiphytes*]
- 730x. *Parafusulina* cf. *P. allisonensis* Ross  
*P. brooksensis* Ross
- 730y. *Parafusulina* sp. [squeezed specimens]
- 730z. *Parafusulina* cf. *P. deliciosensis* Dunbar and Skinner  
*P. cf. P. sellardsi* Dunbar and Skinner  
*P. sp.*  
 [This should be about Word Number 3 (= Willis Ranch Member).]
731. *Polydiexodina shumardi* Dunbar and Skinner  
*Rauserella?* sp.
- 731c. *Pseudoreichelina* sp.  
*Schwagerina* sp.  
*Staffella lacunosa* Dunbar and Skinner [abundant]  
 [This should be low in the Hess.]
- 731e. *Parafusulina* cf. *P. attenuata* Dunbar and Skinner  
*P. cf. P. boesei* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner
- 731m. *Parafusulina* cf. *P. rothi* Dunbar and Skinner  
*P. cf. P. wordensis* Dunbar and Skinner  
*P. sp.* [Probably the same species that Ross called *P. antimonioensis* Dunbar which it is not]  
 [This ought to be Word Number 4]  
*Parafusulina* cf. *P. rothi*  
 [These appear to be somewhat younger than Word Number 2, or China Tank, but I am not sure]
- 731p. *Parafusulina sellardsi* Dunbar and Skinner  
*P. spp.*  
 [This ought to be a Word Number 3 fauna.]
- 731u. *Parafusulina* sp. [completely silicified]  
 [Difficult to say because of poor preservation, but probably Word Number 2 or 3.]  
*Parafusulina* cf. *P. maleyi* Dunbar and Skinner  
*P. sp.* [large]  
 [Again this material is very poor but it should be as high as Word Number 2.]
- 731v. *Parafusulina* spp.
- 731w. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner [not common]

- P. splendens* Dunbar and Skinner  
*Rauserella* sp.  
 [Upper Road Canyon to Word Number 2 is about right.]
- 731x. *Parafusulina ironensis* Ross  
*P. cf. P. sellardsi* Dunbar and Skinner  
*P. sullivanensis* Ross  
*Rauserella* sp.  
 [This appears to be about Word Number 2.]  
*Parafusulina* spp.  
 [Two other species, broken up badly, but apparently about Road Canyon]
- 731y. *Parafusulina boesei* Dunbar and Skinner  
*P. sp.*  
 [Probably Word Number 1, but possibly Number 2.]  
*Parafusulina boesei* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner  
*P. sp.*  
*Rauserella* sp.  
 [This appears to be good Road Canyon; two thin sections appear to be of different lithology and contain *Parafusulina rothi* Dunbar and Skinner.]
- 732c. *Parafusulina sellardsi* Dunbar and Skinner [not common]  
*P. cf. P. wildei* Ross [Abundant; this latter form is a problem (other than just the name); Ross described three species (*P. wildei*, *P. deliciosensis*, and *P. antimonioensis*) missing on the last two identifications and mixing more than one species on the first.]  
 [I would say that this is Limestone Number 3 or younger, but not Limestone Number 4.]
- 732g. *Parafusulina attenuata* Dunbar and Skinner  
*P. cf. P. rothi* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner  
*P. sullivanensis* Ross  
 [Could be high as Word Number 2, but probably Word Number 1.]
- 732h. *Parafusulina attenuata* Dunbar and Skinner  
*P. aff. P. bakeri* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner  
*P. sullivanensis* Ross  
*Rauserella* sp.
- 732i. *Parafusulina* cf. *P. bakeri* Dunbar and Skinner?  
*P. rothi* Dunbar and Skinner  
*P. cf. P. splendens* Dunbar and Skinner  
 [I believe that *P. bakeri* really is a Word species and one mistakenly called Leonard by Dunbar and Skinner; its proper location in the section has always been in doubt.]  
*P. sellardsi* Dunbar and Skinner [loose specimens]  
 [Should be Word Number 3 with *P. sellardsi*.]
- Parafusulina rothi* Dunbar and Skinner  
*P. spp.*  
 [This is probably very high Road Canyon if not younger.]
- 732j. *Parafusulina* cf. *P. sellardsi* Dunbar and Skinner  
*P. aff. P. wordensis* Dunbar and Skinner  
*P. spp.*  
 [It is difficult to believe that these are Road Canyon. I would say that they are closer to Word Number 3. You (Cooper & Grant) noted "definite Road Canyon" for 732j. That is pretty definite; but I identified *Parafusulina* cf. *sellardsi* and *P. aff. wordensis* from it along with *P. spp.* If this really is Road Canyon, then you must have gotten your collections mixed up, because there is no way that these fusulines could be that old.]
- 732n. *Parafusulina attenuata* Dunbar and Skinner  
*P. spp.*
- 732o. *Parafusulina* spp. [with reefoid cobbles]
- 732p. *Parafusulina* sp. [very small, rather primitive-looking species]
- 732q. *Leella bellula* Dunbar and Skinner?  
*Polydiexodina* sp.
- 732s. *Parafusulina* cf. *deliciasensis* Dunbar and Skinner  
*P. sp.* [One extremely large microspheric specimen]  
 [This ought to be about Word Number 3.]
- 732t. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner  
*P. sullivanensis* Ross  
*Rauserella* [possibly 2 species]
- 732w. *Parafusulina attenuata* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner
- 732x. *Parafusulina boesei* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner  
*P. n. sp.* [this looks like the form Ross called *P. deliciosensis*, but we do not think him correct on this point]  
*P. sp.*  
*Rauserella* [abundant]  
 [Are you sure about this being basal Road Canyon? It looks younger.]  
*Parafusulina attenuata* Dunbar and Skinner [abundant]  
*P. boesei* Dunbar and Skinner [abundant]  
*P. n. sp.* [not common]  
*P. splendens* Dunbar and Skinner [not common]
- 732y. *Parafusulina* cf. *P. ironensis* Ross  
*P. n. sp.* [as in 732x]  
 [This could be as high as the lower part of Word Number 2.]
- 732z. *Parafusulina attenuata* Dunbar and Skinner [abundant]  
*P. boesei* Dunbar & Skinner [abundant]

- P. n. sp.* [not common]  
*P. splendens* Dunbar and Skinner [not common]
- 733b. *Parafusulina* cf. *P. boesei* Dunbar and Skinner  
*P. sp.*  
 [Why isn't this also Road Canyon?]
- 733c. *Parafusulina* aff. *P. rothi* Dunbar and Skinner  
*P. spp.*  
 [About Word Number 2.]
- 733d. *Parafusulina splendens* Dunbar and Skinner  
*P. sp.*  
 [About Word Number 2.]
- 733e. *Parafusulina splendens* Dunbar and Skinner  
*P. sp.*  
 [About Word Number 2.]
- 733h. *Schwagerina* aff. *S. hessensis* Dunbar and Skinner
- 733i. *Parafusulina* sp.  
*Schwagerina?* aff. *S. hessensis* Dunbar and Skinner  
 [This looks younger than Decie Ranch.]
- 733k. *Parafusulina deltoides* Ross  
*P. sp.*  
*Staffella* sp. [abundant]
- 733n. *Parafusulina splendens* Dunbar and Skinner  
*P. sp.*
- 733o. *Parafusulina* spp.  
 [This looks younger than Road Canyon.]
- 733p. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner?
- 733s. *Schwagerina* spp. [or primitive *Parafusulina*]  
*Staffella* sp.
- 733u. *Parafusulina boesei* Dunbar and Skinner  
*P. sullivanensis* Ross  
*P. sp.*
- 733v. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner  
*P. sp.* [slender with axial filling]  
*Rauserella* sp. [very abundant]
- 733w. *Parafusulina* cf. *P. boesei* Dunbar and Skinner  
*P. cf. P. maleyi* Dunbar and Skinner  
*P. sp.*  
*Rauserella* sp.
- 733x. *Parafusulina boesei* Dunbar and Skinner  
*P. sp.*
- 733y. *Parafusulina* spp. [silicified]
- 733z. *Parafusulina* spp. [much silicification]  
 [This might be Word Number 2 or 3 equivalent.]
- 734b. *Parafusulina* spp.
- 734d. *Parafusulina* spp.
- 734e. *Parafusulina* spp.
- 735e. *Parafusulina boesei* Dunbar and Skinner  
*P. sp.*
- 736b. *Schubertella melonica* Dunbar and Skinner  
*Schwagerina* cf. *S. pseudoregularis* Dunbar and Skinner  
*S. sp.*
- 736c. *Parafusulina* cf. *P. allisonensis* Ross
- 736e. *Parafusulina durhami* Thompson and Miller  
*P. sp.*  
 [Late Leonardian.]
- 736f. *Parafusulina* cf. *P. durhami* Thompson and Miller  
 [This is obviously not as young as Road Canyon seen anywhere previously.]
- 736g. *Parafusulina* spp. [one resembles an "underdeveloped" *P. boesei*]
- 736o. *Parafusulina rothi* Dunbar and Skinner
- 736p. *Parafusulina boesei* Dunbar and Skinner
- 736q. *Parafusulina* cf. *P. boesei* Dunbar and Skinner  
*P. sp.*
- 737c. *Parafusulina splendens* Dunbar and Skinner  
*P. cf. P. sullivanensis* Ross
- 737h. *Parafusulina* cf. *P. rothi* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner
- 737i. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner [rare]  
*P. splendens* Dunbar and Skinner [rare]
- 737m. *Parafusulina boesei* Dunbar and Skinner  
*P. rothi* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner
- 737n. *Parafusulina attenuata* Dunbar and Skinner  
*P. boesei* Dunbar and Skinner
- 737o. *Parafusulina rothi* Dunbar and Skinner [rare]  
*P. sp.* [fragmental]
- 737p. *Parafusulina rothi* Dunbar and Skinner  
*P. sp.*  
*Skinnerina* sp. [elongate]
- 737q. *Parafusulina splendens* Dunbar and Skinner?  
*P. spp.* [One is a beautiful, thin-walled, delicate species; the other is inflated fusiform, but is very rare. Material is fragmentary.]
- 737r. *Parafusulina* cf. *P. rothi* Dunbar and Skinner  
*P. splendens* Dunbar and Skinner  
*Skinnerina* sp. [rare]  
 [Probably Road Canyon, but could be China Tank.]
- 737t. *Triticites* cf. *T. acutuloides* Ross  
*T. cf. T. marathonsensis* Ross  
 [This cannot possibly be Lenox Hills; it is clearly Missourian (Gaptank).]

737x. *Parafusulina* spp.

[This material is difficult to assess. I would suspect it to be from somewhere low in the Road Canyon, but I am not sure. The species has/have large proloculi, large shells, but the cuniculi do not appear to be too advanced.]

737y. *Parafusulina attenuata* Dunbar and Skinner

*P. boesei* Dunbar and Skinner

*P.* cf. *P. rothi* Dunbar and Skinner

*P.* sp. [as one in 737q]

*P. splendens* Dunbar and Skinner

738d. *Skinnerella* spp.

738e. [Forms which I have suggested in the past as representing an undescribed genus, characterized by having primitive cuniculi, very thin spirotheca, tight coiling, rather small proloculi, and intense septal fluting. Similar, if not identical forms occur in the Bone Spring Limestone above Kriz Lens and in Victorio Canyon in the Sierra Diablo, and in the lower parts of your Skinner Ranch in the eastern Glass Mountains. One specimen resembles *Schwagerina diversiformis* Dunbar and Skinner (Late Wolfcampian–Early Leonardian). We have good Lenox Hills fauna from Udden's "Transition Beds," his bed 4, Cibolo ("Brecciated Zone"). Primitive *Parafusulina* similar, if not identical to some of Ross' small species from the Hess. I would interpret these as Early Leonardian. *Nankinella* sp. and dasyclad algae are also present. We have good Wolfcamp from the ("Lower Brecciated Zone"), Udden's bed 5.]

738g. *Schwagerina* cf. *S. hawkinsi* Dunbar and Skinner  
*S.* sp.738k. *Parafusulina* spp.

[Badly squeezed material but similar to Victorio Peak species seen elsewhere; Leonardian.]

738m. *Parafusulina* aff. *P. fountaini* Dunbar and Skinner

*P. leonardensis* Ross

*P.* sp.

[Early Leonardian.]

738q. *Chalaroschwagerina* sp.

*Schwagerina* cf. *S. hessensis* Dunbar and Skinner

[I would consider this late Wolfcampian or earliest Leonardian.]

738x. *Parafusulina* cf. *P. leonardensis* Ross

*P.* spp.

[Material very similar to 738m; Leonardian.]

738y. *Parafusulina* cf. *P. brooksensis* Ross

*P.* cf. *P. vidriensis* Ross

*P.* sp.

[Leonardian; upper Hess.]

738z. *Parafusulina* spp. [poor specimens, but not too different from below. One form looks rather intermediate between *P. leonardensis* Ross and *P. dunhami* Thompson and Miller.]

[Leonardian.]

739a. *Parafusulina* cf. *P. rothi* Dunbar and Skinner

*P. splendens* Dunbar and Skinner

*P. wildei* Ross

[This material could be upper Road Canyon, but I would place it higher, possibly China Tank (Word Number 2).]

739b. *Parafusulina deliciasensis* Dunbar and Skinner

*P. sellardsi* Dunbar and Skinner

*Rauserella erratica* Dunbar

[Appears to be a clear-cut Willis Ranch (Word Number 3) fauna.]

739e. *Parafusulina boesei* Dunbar and Skinner

*P. maleyi* Dunbar and Skinner

*P. rothi* Dunbar and Skinner

*P. splendens* Dunbar and Skinner

739f. *Parafusulina splendens* Dunbar and Skinner?

[Not common and poorly preserved; Road Canyon.]

739i. *Parafusulina spissisepta* Ross

*P. vidriensis* Ross

[Leonardian; upper Hess.]

739j. *Parafusulina* sp.

*Schwagerina?* sp.

[Leonardian.]

### Identifications by Carl O. Dunbar

When we were studying the Hess Ranch Horst and parts of the Wolf Camp Hills and their extension to the east, we were unable to get good brachiopod faunas in the conglomerates, thin-bedded limestones, and dolomites that occur in these areas.

*Carl O. Dunbar, formerly of the Department of Geology, Yale University, New Haven, Connecticut.*

Fusulinids are abundant in some of the thin limestone beds. We asked Dr. Carl O. Dunbar, then of Yale University, to help us. He identified the specimens from the USNM localities in the list below. We are most grateful to Dr. Dunbar for his help in identifying the fusulinids and for his counsel on stratigraphic problems.

- 702v. *Schwagerina guembeli* Dunbar and Skinner  
*S. guembeli pseudoregularis* Dunbar and Skinner
- 702w. *Schwagerina guembeli* Dunbar and Skinner
- 703f. *Schwagerina crassitectoria* Dunbar and Skinner
- 703g. *Schwagerina guembeli* Dunbar and Skinner  
*S. guembeli pseudoregularis* Dunbar and Skinner
- 703h. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner
- 703i. *Schwagerina guembeli* Dunbar and Skinner [rare]  
*Staffella* sp. [very abundant]
- 703j. *Schwagerina crassitectoria* Dunbar and Skinner  
*S. guembeli* Dunbar and Skinner  
*Staffella* sp.
- 703n. *Schwagerina hawkinsi* Dunbar and Skinner  
*S. hessensis* Dunbar and Skinner
- 703q. *Parafusulina* n. sp.
- 703u. *Parafusulina* sp.
- 704k. *Monodiexodina linearis* (Dunbar and Skinner)  
*Schubertella kingi* Dunbar and Skinner  
*Schwagerina nelsoni* Dunbar and Skinner
- 704-l. *Parafusulina* n. sp.
- 704m. *Parafusulina* n. sp.
- 704o. *Monodiexodina linearis* (Dunbar and Skinner)  
*Paraschwagerina acuminata* Dunbar and Skinner  
*Schwagerina nelsoni* Dunbar and Skinner
- 704p. *Monodiexodina linearis* (Dunbar and Skinner) [very abundant]  
*Schubertella* sp.
- 704r. *Pseudoschwagerina uddeni* (Beede and Kniker) [rare]  
[rare]  
*Schwagerina diversiformis* Dunbar and Skinner [abundant]
- 704u. *Pseudoschwagerina texana* Dunbar and Skinner  
*Schwagerina compacta* (White)  
*S. nelsoni* Dunbar and Skinner
- 705ca. *Monodiexodina linearis* Dunbar and Skinner  
*Schwagerina hessensis* Dunbar and Skinner  
*S. nelsoni* Dunbar and Skinner
- 705r. *Parafusulina* sp.
- 705u. *Parafusulina* sp.
- 706j. *Parafusulina* n. sp.
- 706k. *Parafusulina* n. sp.
- 706-l. *Schwagerina guembeli* Dunbar and Skinner
- 706r. *Parafusulina boesei* Dunbar and Skinner  
*P. boesei attenuata* Dunbar and Skinner
- 706s. *Triticites primarius* Burma?  
*T.* sp.
- [These all appear to be redeposited but are a Gap-tank Formation fauna.]
- 706t. *Schwagerina emaciata* (Beede)  
*Triticites pinguis* Dunbar and Skinner  
*T. ventricosus* (Meek and Hayden)
- 706u. *Pseudoschwagerina uddeni* (Beede and Kniker)  
*Schwagerina* sp.  
*Triticites ventricosus* (Meek and Hayden)
- 706w. *Monodiexodina linearis* (Dunbar and Skinner)  
*Schwagerina* sp.
- 707r. *Schwagerina* sp. [near *Parafusulina*]
- 708f. *Schubertella melonica* Dunbar and Skinner [abundant]  
*Schwagerina* sp.
- 708i. *Schubertella melonica* Dunbar and Skinner [very abundant]
- 715b. *Pseudoschwagerina uddeni* Dunbar and Skinner [including microspheric shells]  
*Schwagerina emaciata* (Beede)  
*S. pugunculus* Ross [including microspheric shells]  
*S. n. sp.?*

### Identifications by Charles A. Ross

Dr. Charles A. Ross, while at Yale, identified many samples from USNM localities sent there for study. He was, at that time, studying the stratigraphy and fusulinids of the Glass Mountains and later he published extensively on these subjects (see Ross, 1959, 1960, 1962b, 1963a, 1963b, 1965). We are most grateful to Dr. Ross for his identifications and the comments included in his list.

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Charles A. Ross, Department of Geology, Western Washington State College, Bellingham, Washington 98225.

- 700a. *Triticites newelli* Burma  
*Triticites* aff. *T. primarius* Burma
- 701f. *Triticites cullomensis* Dunbar and Skinner  
*T. primarius* Burma
- 701x. *Triticites primarius* Burma
- 701y. *Triticites comptus* Ross
- 702i. *Triticites cullomensis* Dunbar and Skinner
- 702k. *Triticites cullomensis* Dunbar and Skinner?
- 702-l. *Pseudoschwagerina texana* Dunbar and Skinner  
*Schwagerina gracilitatis* Dunbar and Skinner

- 702n. *Triticites cullomensis* Dunbar and Skinner
- 702o. *Triticites beedei* Dunbar and Skinner  
*T. primarius* Burma
- 702p. *Triticites cullomensis* Dunbar and Skinner
- 702q. *Triticites cullomensis* Dunbar and Skinner
- 702s. *Triticites beedei* Dunbar and Skinner?  
*T. comptus* Ross
- 702t. *Paraschwagerina acuminata* Dunbar and Skinner?  
*Schwagerina compacta* (White)  
*S. gracilitatis* Dunbar and Skinner
- 702u. *Triticites beedei* Dunbar and Skinner  
*T. primarius* Burma
- 702x. *Pseudoschwagerina parabeedei* Ross?  
*Schwagerina compacta* (White)  
*S. spp.*
- 702z. *Triticites primarius* Burma
- 703k. *Triticites cullomensis* Dunbar and Skinner
- 703-l. *Triticites beedei* Dunbar and Skinner  
*T. cullomensis* Dunbar and Skinner
- 703m. *Schwagerina pugunculus* Ross  
*Triticites pinguis* Dunbar and Skinner  
*T. uddeni* Dunbar and Skinner  
*T. ventricosus* (Meek and Hayden)
- 703p. *Triticites cullomensis* Dunbar and Skinner
- 703r. *Triticites cullomensis* Dunbar and Skinner
- 703t. *Pseudoschwagerina texana* Dunbar and Skinner  
*P. uddeni* (Beede and Kniker)  
*Schwagerina gracililatus* Dunbar and Skinner
- 703v. *Triticites cullomensis* Dunbar and Skinner
- 703x. *Triticites cullomensis* Dunbar and Skinner
- 704a. *Triticites primarius* Burma
- 704b. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)
- 704c. *Triticites comptus* Dunbar and Skinner
- 704e. *Monodiexodina linearis* (Dunbar and Skinner)  
*Schwagerina diversiformis* Dunbar and Skinner
- 704h. *Triticites beedei* Dunbar and Skinner
- 704i. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
*Monodiexodina linearis* (Dunbar and Skinner)
- 704j. *Pseudoschwagerina parabeedei* Ross  
*Schwagerina diversiformis* Dunbar and Skinner
- 704q. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
*Monodiexodina linearis* (Dunbar and Skinner)
- 704r. *Pseudoschwagerina parabeedei* Ross?  
*Schwagerina diversiformis* Dunbar and Skinner
- 704t. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
*Monodiexodina linearis* (Dunbar and Skinner)
- 704u. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
*Pseudoschwagerina* cf. *P. texana* Dunbar and Skinner?
- 704v. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
*Pseudoschwagerina parabeedei* Ross
- 704w. *Triticites primarius* Burma
- 705f. *Triticites joensis* Thompson
- 705j. *Triticites cullomensis* Dunbar and Skinner
- 705k. *Monodiexodina linearis* (Dunbar and Skinner)  
*Pseudoschwagerina* cf. *P. texana* Dunbar and Skinner  
*Schwagerina crebrisepta* Ross  
*S. diversiformis* Dunbar and Skinner  
*Stewartina laxissima* (Dunbar and Skinner)
- 705m. *Pseudoschwagerina robusta* (Meek)  
*P.* cf. *P. texana* Dunbar and Skinner  
*Schwagerina diversiformis* Dunbar and Skinner
- 705q. *Triticites cullomensis* Dunbar and Skinner
- 705t. *Pseudoschwagerina* cf. *P. texana* Dunbar and Skinner
- 705v. *Triticites primarius* Burma
- 705x. *Triticites primarius* Burma
- 705y. *Triticites cullomensis* Dunbar and Skinner
- 706h. *Monodiexodina linearis* (Dunbar and Skinner)  
*Pseudoschwagerina* cf. *P. texana* Dunbar and Skinner  
*Stewartina laxissima* (Dunbar and Skinner)
- 706i. *Monodiexodina linearis* (Dunbar and Skinner)
- 706p. *Triticites pinguis* Dunbar and Skinner  
*T. ventricosus* (Meek and Hayden)?  
*T. uddeni* Dunbar and Skinner
- 706q. *Triticites comptus* Ross
- 706v. *Paraschwagerina plena* Ross  
*Pseudoschwagerina parabeedei* Ross [pebbles]  
*Schwagerina crebrisepta* Ross  
*S. emaciata* (Beede) [pebbles]  
*S. pugunculus* Ross [pebbles]  
[Mostly reworked specimens of *Triticites* cf. *T. uddeni* Dunbar and Skinner and *Pseudoschwagerina* sp.]
- 706x. *Pseudoschwagerina gigantea* (White)  
*P. texana* Dunbar and Skinner  
*P. uddeni* Dunbar and Skinner  
*Schwagerina pugunculus* Ross
- 707j. *Pseudoschwagerina parabeedei* Ross
- 707m. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
*Pseudoschwagerina robusta* (Meek)  
*Schwagerina crebrisepta* Ross
- 707o. *Schwagerina crebrisepta* Ross  
*S. laxissima* Dunbar and Skinner



- 708g. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
 708h. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)  
*Stewartina laxissima* (Dunbar and Skinner)  
 708i. *Schubertella melonica* Dunbar and Skinner  
 708k. *Chalaroschwagerina? nelsoni* (Dunbar and Skinner)

- Monodiexodina linearis* (Dunbar and Skinner)  
*Schwagerina diversiformis* Dunbar and Skinner  
 708n. *Triticites burgessae* Burma  
 718q. *Schwagerina emaciata* (Beede)  
*S. pugunculus* Ross

***Age Relations of Fusulinaceans from the  
 Gaptank, Neal Ranch, Lenox Hill, and Skinner Ranch Formations***

BY CHARLES A. ROSS

The species of fusulinaceans listed above and also in Dunbar and Skinner (1937), and Ross (1959, 1963, 1965, and 1975), indicate the following ages. The "Uddenites-bearing" shale and the limestone beneath it have *Triticites secalicus*, *T. cullomensis*, early *T. ventricosus*, *Dunbarinella* sp., and *Waeringella* sp. and, therefore, are older than the Thrifty Formation of northcentral Texas and are close to, or the same age as, the Ivan Limestone Member and superjacent beds in the Graham Formation in northcentral Texas. In terms of the Russian Platform and pre-Ural sections, these fusulinaceans compare well with those in the middle to upper part, but not the highest part, of the Carboniferous Gzhel'ian Stage.

"Bed 2 of the Gray Limestone Member" has a meager fusulinacean fauna of three or four species in the Wolfcamp Hills and laterally equivalent beds have only a few additional species to contribute to this fauna. Most of the species are the same as or similar to those in the underlying "Uddenites-bearing" shale. *Triticites capaxoides* Ross, a species with a wide range of prolocular sizes, and *T. nealensis* Ross are probably characteristic of "Bed 2." Wilde (1971) has reported *Schwagerina* species from this bed and considered it equivalent to the lowest zone of the McCloud, which also is difficult to correlate with other late Paleozoic sections. Bostwick (1962) illustrated and identified a number of fusulinaceans from the "Uddenites-bearing" shale and higher beds at two places along the Glass Mountains escarpment. His illustrated specimens identified as *Schwagerina* from the "Uddenites-bearing" shale and "Bed 2" should be assigned to *Triticites*. Four of the illus-

trated specimens that he assigned to *Schwagerina* (Bostwick, 1962, pl. 164: figs. 4, 14; pl. 166: figs. 11, 13) are probably *Triticites confertoides* (Ross, 1965), an advanced species with folded septa in which the chomata adjacent to the tunnel in later volutions become more or less discontinuous (pseudo-chomata). This set of features is similar to features found in *Daixina*, a Russian Platform and pre-Ural genus, which ranges through the upper part of the Gzhel'ian Stage and into the Asselian. One species of *Daixina* (not very similar to *T. confertoides* in other features) and species of *Pseudofusulina* form an important zone at the top of the Gzhel'ian marking the "Orenburgian Stage" of some Soviet authors. The top few decimeters of "Bed 2" commonly are a limestone conglomerate and may contain a mixed fusulinacean fauna.

The Neal Ranch and Lenox Hills formations constitute the Zone of *Pseudoschwagerina* in the Glass Mountains, which includes *Triticites* (*Leptotriticites*), *Paraschwagerina*, *Pseudofusulina*, *Schwagerina*, *Stewartina*, *Eoparafusulina*, and *Schubertella* along with *Triticites* (*Triticites*). This fusulinacean fauna compares well with that from the Asselian; however, several differences also are apparent. The Asselian "Zone of *Schwagerina*," because of taxonomic confusion and disagreement, is not based on the same genus as the North American Zone of *Schwagerina* or the Zone of *Pseudoschwagerina* for reasons that are too involved to explore here. The species on which the Soviet "Zone of *Schwagerina*" is based have been assigned to *Sphaeroschwagerina*, a genus that many Soviet workers do not accept and which is not known from West Texas. Primitive species of *Pseudoschwagerina*, similar to those in the Neal Ranch fauna, occur with *Sphaeroschwagerina* in the Asselian, so it seems reasonably certain that the Asselian and Neal Ranch faunas

are correlative. The Sakmarian, Tastubian, and Sterlitamakian beds of the Ural region lack both *Sphaeroschwagerina* and *Pseudoschwagerina*, but have species of *Schwagerina* (North American sense) and *Pseudofusulina* that are similar to those from

the Lenox Hills. The "Hess Ledge" and the Decie Ranch Member of the Skinner Ranch Formation have fusulinacean faunas that are similar to those of the lower part of the Artinskian Stage and include primitive *Parafusulina* and *Eoparafusulina*.

# Corrigenda

## Corrections to Localities

(appearing in Part I, pages 135–165)

- | <i>Page</i> |   |  |
|-------------|---|--|
| 138         | AMNH 813: <i>should read</i> AMNH 843.  |  |
| 142         | USNM 702r (first 702r that follows 702m):<br><i>should read</i> USNM 702n.  | 10° E of Sullivan Peak, 1.03 mi N 73° E of<br>hill 5300, Lenox Hills Formation, Altuda<br>quadrangle.  |
| 145         | USNM 706b: <i>should read</i> (lower thin lens be-<br>tween Willis Ranch and Appel Ranch mem-<br>bers).           | 158 USNM 723u: <i>for</i> S 70° E <i>read</i> S 70° W.   |
| 150         | USNM 711d: <i>for</i> N 20° W <i>read</i> N 2° W.   | 158 USNM 724a: <i>for</i> N 56° W <i>read</i> S 56° W.   |
| 157         | USNM 722g: <i>should read</i> 1.45 mi S 72° W of<br>hill 4910, 1.25 mi N 9° E of hill 4920,<br>Altuda quadrangle. | 159 USNM 726i: <i>for</i> Hess Ranch quadrangle <i>read</i><br>Hess Canyon quadrangle.   |
| 158         | USNM 722z: <i>should read</i> 50 ft above top of<br>Decie Ranch Member in ravine 3.1 mi S                         | 161 USNM 728e: <i>for</i> 2.15 miles <i>read</i> 2.45 mi.  |
|             |   | 163 USNM 733j: <i>for</i> (hill 5191) <i>read</i> (hill 5195).   |
|             |   | 164 USNM 740-l: <i>should read</i> Capitan Forma-<br>tion: About 7300 ft elev., 0.9 mi S 58° E of<br>Guadalupe Peak, 0.8 mi N 51° E of El<br>Capitan, Guadalupe Peak quadrangle. |

## Additions to Localities

Abbreviations used in these locality designations now added to the lists appearing in Part I, pages 135–165, are:

A = American Museum of Natural History [abbreviated elsewhere herein: AMNH]

N = National Museum of Natural History, formerly United States National Museum [abbreviated elsewhere herein: USNM]

Additions to the list of United States Geological Survey Localities (Part I, page 135) are included in the faunal list of brachiopods arranged by USGS localities.

- |  |   |
|--|---|
| A323. Phosphoria Formation (Bed 13) [about 6 mi NE of Indian Pass (hill 5970), just E of hill 7200, Confusion Range, Fish Springs Quad., Utah]                             | A402. Cherry Canyon Formation (Manzanita Member) [gulch immediately W of southern promontory of Rader Ridge, approximately 1 mi SW of Nickel Creek station]   |
| A351. Bell Canyon Formation (Lamar Member) [N side of mouth of McKittrick Canyon, $\frac{5}{16}$ mi SE of hill 7059 just beyond margin of Lamar Limestone, Guadalupe Mts.] | A409. Bell Canyon Formation (McCombs Member) [head of ridge to S of Rader Ridge and between it and Smith Spring (N of Juniper Spring), Guadalupe Peak Quad.]  |
| A390. Hueco Formation [1.1 mi NE of BM 5325 ft, Rancheria Mt., Hueco Mts., El Paso and Hudspeth counties, Texas Oil and Gas Preliminary Sheet No. 36, No. 1]               | A633. Bone Spring Formation [180 ft below top of north-easternmost hill of Bone Spring Limestone in Baylor Mts.]  |
| A397. Bell Canyon Formation (probably Pinery Member) [on promontory of spur approximately 0.2 mi E of Hegler Ranch house on N side of road, Guadalupe Peak Quad.]          | A653. Hueco Formation [hill SE of hill 4978, N of drainage divide in Red Tank Canyon, Baylor Mts.]  |
|  | A661. Bone Spring Formation [small reef at entrance to Bone Spring Canyon about 100 ft below Brushy Canyon base]  |
|  | A663. Bone Spring Formation (Victorio Peak Member) [silicified blocks, top of highest cliff on S side of Pure-Hunter oil well canyon, 0.4 mi due E of well site, Guadalupe Mts.]                        |
|  | A799. Capitan Formation (= Lamar Member) [N side of McKittrick Canyon at mouth; base of first cliff S 40° E of triangulation station 6500]  |
|  | N513c. Graham Formation [Road to Barton Chapel, 4.8 mi S of Texas 24, 0.5 mi N of Stradley School, Jack County]   |
|  | N518v. Gunsight Formation [SE $\frac{1}{4}$ SW $\frac{1}{4}$ plot S1, 2.2 mi N 80° W of 36th Division State Park Headquarters, 100 yards north of Park road 15, 5.5 mi S 80° E of Grosvenor, Brown Co.] |
|  | N700b. Gaptank Formation [small nob $\frac{1}{4}$ to $\frac{1}{2}$ mi S of locality 700]  |

- N700e. Gaptank Formation [*Prouddenites* bed, in gully, 1.9 mi S 5° W of Arnold Ranch, Monument Spring Quad.]
- N700i. Gaptank Formation (*Uddenites* zone) [0.2 to 0.3 mi NE of hill 5060, Wolf Camp Hills, Hess Canyon Quad.]
- N701j. Neal Ranch Formation [float, Wolf Camp Hills, Hess Canyon Quad.]
- N701n. Neal Ranch Formation (bed 14 of P. B. King) [on W side of canyon at head, center of Wolf Camp Hills, Hess Canyon Quad.]
- N701o. Gaptank Formation (*Uddenites*-bearing Shale Member) [patch of shale on E side of Geologist Canyon mouth, 0.55 mi S 71° W of hill 5060 ft, W end of Wolf Camp Hills, Hess Canyon Quad.]
- N701s. Gaptank Formation (*Uddenites*-bearing Shale Member) [along road 0.32 mi S 18° E of hill 4815, 3 mi W of Conoly Brooks Ranch, at 4460 ft, Hess Canyon Quad.]
- N701w. Gaptank Formation (*Uddenites*-bearing Shale Member) [edge of hill just SE of knob, 0.33 mi S 75° W of hill 5060, Wolf Camp Hills, Hess Canyon Quad.]
- N702i. Gaptank Formation [just above limestone bed 2 of P. B. King (not equal to Gray Limestone Member of P. B. King) 0.5 mi SW of Gaptank, W of Stockton Pass, 4 mi NE of Montgomery Ranch, Hess Canyon Quad.]
- N702n. Gaptank Formation (*Uddenites*-bearing Shale Member) [E slope of W side of Amphitheater, 0.8 mi N 40° E of hill 5060, Wolf Camp Hills, Hess Canyon Quad.]
- N704z. Leonard Formation [near top of hill 5200, ¼ mi SSW of hill 5300, Altuda Quad.]
- N705c. Gaptank Formation [Ammonites from near head of ravine at 5075 ft on E side of SE nose of Leonard Mtn., 0.28 mi S 64° E of BM 5860, Hess Canyon Quad.]
- N705i. Gaptank Formation [under large cedar tree in ravine in SE nose of Leonard Mtn., near top of shale, 0.28 mi S 64° E of BM 5860, Hess Canyon Quad.]
- N708v. Skinner Ranch Formation (Sullivan Peak Member) [long dip slope of hill 5021, at stream and road crossing, N end of hill, 1.5 mi WNW of hill 5021, Altuda Quad.]
- N709b. Moran Formation [quarry on E side of U.S. 283, 5 mi SE of Moran]
- N711s. Road Canyon Formation [7 ft above 15 foot limestone, 1.6 mi S 32° E of BM 4973, Gilliland Canyon, Altuda Quad.]
- N712d. Hueco Formation [½ mi NNE of Hueco Inn, E of road, Hueco Mts.]
- N713h. Neal Ranch Formation (= beds 5–8 of P. B. King) [E end of canyon in Wolf Camp Hills, Hess Canyon Quad.]
- N713v. Cathedral Mountain Formation [10–15 ft above Leonard Limestone No. 1; SE nose of hill 4920, Altuda Quad.]
- N714z. Skinner Ranch Formation [0.25 mi S 43° W of hill 5021, E of Sullivan Ranch Road, Altuda Quad.]
- N715-l. Lenox Hills Formation [near base of hill just W of Slick-Urschell well, Decie Ranch, Altuda Quad.]
- N715o. Skinner Ranch Formation (Sullivan Peak Member) [0.25 mi S 30° W of hill 4920, Altuda Quad.]
- N715p. Skinner Ranch Formation (Sullivan Peak Member) [loose on slope under cliff of Leonard Limestone Number 1 in section 0.95 mi N 79° E of hill 5300, Lenox Hills, Altuda Quad.]
- N715q. Hess Formation [0.48 mi N 81° E of BM 5652, E of Old Word Ranch, Hess Canyon Quad.]
- N715u. Skinner Ranch Formation (Sullivan Peak Member) [W side Sullivan Ranch Road, 0.77 mi S 33° E of hill 4920, 1.48 mi N 61° E of hill 5300, Lenox Hills, Altuda Quad.]
- N716b. Hess Formation [at 4940 ft in long section 0.6 mi due N of hill 4952 in mountain front N of Wolf Camp Hills, Hess Canyon Quad.]
- N716c. Hess Formation [at 4972 ft in section 0.6 mi due N of hill 4952 in mountain front N of Wolf Camp Hills, Hess Canyon Quad.]
- N716g. Hess Formation [at 5188 ft in long section 0.6 mi due N of hill 4952, in mountain front N of Wolf Camp Hills, Hess Canyon Quad.]
- N718g. Cathedral Mountain Formation [on slope above saddle, 0.6 mi S 80° W of hill 5021, at about 4890 ft, Altuda Quad.]
- N718r. Neal Ranch Formation [ledge of brown limestone 20–25 ft below Lenox Hills conglomerate, center of hill just W of main canyon, 0.65 mi N 76° W of hill 5060, Wolf Camp Hills, Hess Canyon Quad.]
- N718t. Skinner Ranch Formation (Decie Ranch Member) [near base of "Wolfcamp" of P. B. King just S of second knob of spur at E end of Lenox Hills, 0.5 mi W of Sullivan (Yates) Ranch road, 1.2 mi N 78° E of hill 5300, N of Decie Ranch, Altuda Quad.]
- N718u. Hess Formation [100 ft below Taylor Ranch Member at locality 702d]
- N718v. Skinner Ranch Formation (Poplar Tank Member) [0.53 mi N 86° E of hill 5300 at about 4875 ft elevation, Altuda Quad.]
- N720h. Skinner Ranch Formation (Decie Ranch Member) [1.28 mi S 80° W of hill 5816, W side of Hess Ranch Horst, Hess Canyon Quad.]
- N720i. Skinner Ranch Formation (Decie Ranch Member: *Scacchinella* beds) [0.65 mi N 17° W of Hess Ranch house, Hess Canyon Quad.]
- N720k. Skinner Ranch Formation (Decie Ranch Member: *Scacchinella* beds) [0.63 mi N 8° W of Hess Ranch house, Hess Canyon Quad.]
- N720-l. Neal Ranch Formation [base of section about 4820 ft, 2.42 mi S 87.5° W of hill 5060, W of Wolf Camp Hills, Hess Canyon Quad.]
- N720m. Hess Formation [at 4932 ft elevation in hill 2.42 mi S 87.5° W of hill 5060, W of Wolf Camp Hills, Hess Canyon Quad.]
- N720u. Hess Formation [at 4943 ft elevation in hill 2.42 mi S 87.5° W of hill 5060, W of Wolf Camp Hills, Hess Canyon Quad.]
- N720o. Hess Formation [5040 ft in hill, same as locality 720m]
- N720p. [5051 ft in hill, same as locality 720m]
- N720q. Hess Formation [5102 ft in hill, same as locality 720m]

- N720r. Hess Formation [5106 ft in hill, same as locality 720m]
- N720s. Hess Formation [5160 ft in hill, same as locality 720m]
- N720t. Hess Formation [5251 ft in hill, same as locality 720m]
- N720u. Hess Formation [5262 ft in hill, same locality as 720m]
- N720v. Lenox Hills Formation [5746 ft elevation in hill 5816, Hess Ranch Horst, W side of hill above saddle at 5600 ft, Hess Canyon Quad.]
- N720w. Lenox Hills Formation [5801 ft elevation on W side of hill 5816, Hess Ranch Horst, Hess Canyon Quad.]
- N720y. Lenox Hills Formation [0.44 mi N 8° W of hill 5816, Hess Ranch Horst, Hess Canyon Quad.]
- N720z. Lenox Hills Formation [SE nose of Leonard Mtn., Hess Canyon Quad.]
- N721c. Lenox Hills Formation [27 ft above base of "white" limestone on knob in pass, 0.55 mi due W of hill 5816, Hess Ranch Horst, Hess Canyon Quad.]
- N721d. Lenox Hills Formation [31 ft above base of "white" limestone in knob pass, 0.55 mi S 87.5° W of hill 5816, Hess Ranch Horst, Hess Canyon Quad.]
- N721e. Lenox Hills Formation [crest of knob in pass, 0.55 mi S 87.5° W of hill 5816, Hess Ranch Horst, Hess Canyon Quad.]
- N721f. Cathedral Mountain Formation [loose, 86 ft below Word Limestone, slope facing Leonard Mtn., Hess Canyon Quad.]
- N721h. Gaptank Formation (*Uddenites*-bearing Shale Member) [dip slope on S side of canyon, 0.4 mi up from mouth, upper *Uddenites* zone slope between hill 5060 and canyon, Hess Canyon Quad.]
- N721n. Neal Ranch Formation (probably Gray Limestone Member = Bed 2 of P. B. King) [loose on NW slope of knob on S side of *Uddenites* saddle, Wolf Camp Hills, Hess Canyon Quad.]
- N721qc. Road Canyon Formation [at 5297–5313 ft elevation, 1.83 mi N 83° W of Hess Ranch, Hess Canyon Quad.]
- N722i. Skinner Ranch Formation (Sullivan Peak Member) [0.35 mi S 15° W of hill 4920, Altuda Quad.]
- N722k. Skinner Ranch Formation (Sullivan Peak Member) [1.7 mi S 15° E of Old Payne Ranch, W flank of Dugout Mtn., Monument Spring Quad.]
- N722r. Skinner Ranch Formation (lower Sullivan Peak Member) [ravine 3.1 mi S 10° E of Sullivan Peak, 1.03 mi N 73° E of hill 5300, Lenox Hills, Altuda Quad.]
- N722u. Skinner Ranch Formation (Decie Ranch Member) [*Scacchinella* beds 2.35 mi N 22° E of Hess Ranch house, Hess Canyon Quad.]
- N722y. Skinner Ranch Formation (Poplar Tank Member) [30 ft above Decie Ranch Member, same as location 722r]
- N723b. Hess Formation [0.3 mi N 11° W of BM 5860, Leonard Mtn., Hess Canyon Quad.]
- N723e. Skinner Ranch Formation (Poplar Tank Member) [ravine 3.1 mi S 10° E of Sullivan Peak, 1.03 mi N 73° E of hill 5300, Lenox Hills, Altuda Quad.]
- N723f. Cibolo Formation [250 ft up slope, W end Permian, narrows of Cibolo Creek, Shafter Quad.]
- N723g. Hueco Formation [100 ft above divide in Red Tank Canyon, Baylor Mts., Van Horn Quad.]
- N725q. Cibolo Formation [thin-bedded limestone 265 ft vertical up slope, narrows of Cibolo Creek, Chinati Peak Quad.]
- N725u. Cibolo Formation [260 ft vertical in thin-bedded limestone, narrows of Cibolo Creek, Chinati Peak Quad.]
- N726m. Lenox Hills Formation [0.65 mi S 30° W of hill 5816, 1.78 mi S 68° E of Willis Ranch site, Hess Ranch Horst, Hess Canyon Quad.]
- N728u. Capitan Formation [1 mi NW of Frijole P.O., first ledge of limestone above Delaware Sandstone]
- N728x. Graham Formation (Wayland Shale Member) [1.2 mi S of Gunsight]
- N728y. Hueco Formation (near base) [Permian foothills about 4 mi E of highway U.S. 80–85, at White Spur, 9 mi N of El Paso, Texas (in Franklin Mts.)]
- N728z. Copacabana Formation [hillside 2.5 km S 40° E of Apillapampa, S of Capinota, Bolivia]
- N729f. Skinner Ranch Formation (Poplar Tank Member) [slope on S end of Lenox Hills, just W of hill 4801, Monument Spring Quad.]
- N729m. Skinner Ranch Formation (Sullivan Peak Member) [type section of member, hill 5300, Lenox Hills]
- N729u. Hess Formation [slope of hill, 0.65 mi S 50° W of hill 5021, Altuda Quad.]
- N729z. Cathedral Mountain Formation [N side of road to Split Tank, 3.35 mi N 49° E of Hess Ranch House, Texas]
- N730a. Lenox Hills Formation [loose on conglomerate slope SE nose of Leonard Mtn., Hess Canyon Quad.]
- N730c. Neal Ranch Formation (= King bed 8) [Hogback N of Geologist Canyon, Wolf Camp Hills, Hess Canyon Quad.]
- N730e. Skinner Ranch Formation (Dugout Mountain Member) [about middle of Third Limestone of the Leonard, 1.6 mi S 87° W of Dugout Mtn. (5195), 1.4 mi S 50° W of Old Payne Ranch site, Monument Spring Quad.]
- N730f. Skinner Ranch Formation (Dugout Mountain Member) [upper part of Third Limestone of the Leonard, same as locality 730e]
- N730g. Skinner Ranch Formation (Dugout Mountain Member) [1.15 mi N 74° W of Dugout Mtn. (hill 5195), 1.05 mi S 20° E of Old Payne Ranch site, Monument Spring Quad.]
- N730i. Skinner Ranch Formation (Dugout Mountain Member) [top of Third Limestone of the Leonard, 0.87 mi N 64° W of Dugout Mtn. (5195), 1.17 mi S 37° E of Old Payne Ranch site, Monument Spring Quad.]
- N730j. Skinner Ranch Formation (Dugout Mountain Member) [fourth Limestone of the Leonard, 1.08 mi N 55° W of Dugout Mtn. (5195), 0.9 mi S 36° E of Old Payne Ranch site, Monument Spring Quad.]
- N730–l. Skinner Ranch Formation (Sullivan Peak Member) [on top of largest bioherm at S end of Lenox Hills in hill 4801, Monument Spring Quad.]
- N730p. Skinner Ranch Formation [base of heavy beds in fault block, 1.6 mi N 54° E of Hess Ranch, 0.52 mi N 75° W of hill 5726, Hess Canyon Quad.]

- N730t. Skinner Ranch Formation (Bed C) [siliceous shale with fusulinids, fault block 1.55 mi N 40° E of Hess Ranch, Hess Canyon Quad.]
- N730w. Word Formation (Willis Ranch Member) [0.53 mi N 75° E of BM 4973, 1.25 mi N 32° E of BM 4869, Gilliland Canyon, Altuda Quad.]
- N730x. Hess Formation [0.7 mi N 30° W of hill 5725, 1.1 mi N 70° W of hill 5767, Hess Canyon Quad.]
- N730y. Hess Formation [3.15 mi N 58° E of Hess Ranch, 1.1 mi S 59° E of hill 5816, Hess Canyon Quad.]
- N730z. Word Formation [1.55 mi N 13° W of hill 4910, 0.9 mi S 29° W of hill 5939, Altuda Quad.]
- N731c. Skinner Ranch Formation [upper *Scacchinella* beds, 0.9 mi N 74° W of hill 5816, 1.5 mi S 76° E of Willis Ranch site, Hess Ranch Horst, Hess Canyon Quad.]
- N731f. Skinner Ranch Formation (Poplar Tank Member) [W saddle of "Windmill" hill, E side of Sullivan Ranch Road, hill 5021, Altuda Quad.]
- N731g. Skinner Ranch Formation (Sullivan Peak Member) [loose on outcrop at locality 707o]
- N731h. Word Formation (Willis Ranch Member) [0.5 mi N of hill 5611, Hess Canyon, Glass Mts.]
- N731i. Neal Ranch Formation [float on Dugout Mtn., Monument Spring Quad.]
- N731n. Cathedral Mountain Formation [0.9 mi S 74° E of hill 4910, 1.95 mi N 27° E of hill 5021, Altuda Quad.]
- N731s. Cathedral Mountain Formation [0.9 mi S 4° W of hill 4920, 1.73 mi S 70° W of hill 5021, Altuda Quad.]
- N731v. Word Formation [0.57 mi S 28° E of Sullivan Peak (BM 6125), 1.07 mi S 5° E of Sullivan (Yates) Ranch, Altuda Quad.]
- N731w. Road Canyon Formation (top bed) [0.65 mi S 30° E of Sullivan Peak (BM 6125), 1.18 mi S 80° E of Sullivan (Yates) Ranch, Altuda Quad.]
- N731x. Word Formation (Bed C); possibly Road Canyon [1.1 mi S 39° W of hill 5935, Altuda Quad.]
- N731y. Word Formation (Bed A) = Road Canyon Formation [1.1 mi S 39° W of hill 5935, Altuda Quad.]
- N732g. Road Canyon Formation [3 ft below top of A in section, 0.62 mi S 69° W of Old Payne Ranch site, 0.4 mi N 80° E of hill 4806, Monument Spring Quad.]
- N732h. Road Canyon Formation (Bed C) [0.65 mi S 69° W of Old Payne Ranch site, 0.35 mi N 80° E of hill 4806, Monument Spring Quad.]
- N732-l. Cathedral Mountain Formation [ammonites at 4637 ft on conical hill 0.25 mi N 28° W of Old Payne Ranch site, Monument Spring Quad.]
- N732n. Road Canyon Formation [middle bioherms in conical hill 0.25 mi N 28° W of Old Payne Ranch site, Monument Spring Quad.]
- N732o. Road Canyon Formation [10 ft above the base of the bioherms in conical hill 0.25 mi N 28° W of Old Payne Ranch site, Monument Spring Quad.]
- N732p. Road Canyon Formation [very top of conical hill 0.25 mi N 28° W of Old Payne Ranch site, Monument Spring Quad.]
- N732r. Road Canyon Formation [*Coscinophora*, 10 ft below top of conical hill, 0.25 mi N 28° W of Old Payne Ranch, Monument Spring Quad.]
- N732x. Road Canyon Formation (base) [1.32 mi N 52° W of Old Payne Ranch site, 1.15 mi N 4° W of hill 4806, Monument Spring Quad.]
- N732y. Road Canyon Formation(?) [1.35 mi N 53° W of Old Payne Ranch site, 1.15 mi N 6° W of hill 4806, Monument Spring Quad.]
- N732z. Road Canyon Formation (upper) [1.36 mi N 50° W of Old Payne Ranch site, 1.2 mi N 2° W of hill 4806, Monument Spring Quad.]
- N733b. Road Canyon Formation (Bed B) [in section 1.55 mi N 64° W of Old Payne Ranch, Monument Spring Quad.]
- N733c. Road Canyon Formation (Bed D) [1.55 mi N 64° W of Old Payne Ranch site, Monument Spring Quad.]
- N733d. Road Canyon Formation (Bed H) [fusulinid limestone, 1.55 mi N 64° W of Old Payne Ranch site, Monument Spring Quad.]
- N733e. Road Canyon Formation (Bed J) [1.55 mi N 64° W of Old Payne Ranch site, Monument Spring Quad.]
- N733f. Road Canyon Formation (Bed L) [crumbly shale with ammonites, in section 1.55 mi N 64° W of Old Payne Ranch site, Monument Spring Quad.]
- N733i. Skinner Ranch Formation (Sullivan Peak Member) [1.33 mi N 39° E of Dugout Mtn. (BM 5195), 2.0 mi N 53° E of BM 4190, Monument Spring Quad.]
- N733k. Skinner Ranch Formation (Sullivan Peak Member) [*Coscinophora* bioherm, same locality as 733j; Fusulinids from 30 ft below *Coscinophora*]
- N733o. Road Canyon Formation [17 ft under bioherm on nose of hill in a 2 ft lens, 0.83 mi S 70° W of Old Word Ranch site, 1.15 mi S 12° E of hill 5507, Hess Canyon Quad.]
- N733p. Road Canyon Formation [about 15 ft above locality 733o]
- N733s. Skinner Ranch Formation [1.2 mi S 46° E of Willis Ranch site, 0.35 mi N 48° W of hill 5305, Hess Canyon Quad.]
- N733t. Road Canyon Formation [1.82 mi N 84° W of Hess Ranch, 0.27 mi S 28° E of hill 5674, Hess Canyon Quad.]
- N733u. Road Canyon Formation (Bed H) [1.82 mi N 84° W of Hess Ranch, 0.27 mi S 28° E of hill 5674, Hess Canyon Quad.]
- N733v. Road Canyon Formation (Bed D) [same locality as 733u]
- N733w. Cibolo Formation (exact level indefinite) [2 mi NW of Ojo Bonito, Chinati Peak Quad.]
- N733x. Cibolo Formation [thin, dark, platy limestone of upper Cibolo, 2 mi NW of Ojo Bonito, Chinati Peak Quad.]
- N733y. Cibolo Formation [1.7 mi N 47° W of Ojo Bonito, Chinati Peak Quad.]
- N734. Bell Canyon Formation (middle Pinery Member) [0.5 mi south of Hegler Ranch, Guadalupe Peak Quad.]
- N734b. Cibolo Formation (upper) [40 ft below top of D, section 2 mi N 49° W of Ojo Bonito, Chinati Peak Quad.]
- N734c. Cibolo Formation (Bed E) [2 mi N 49° W of Ojo Bonito, Chinati Peak Quad.]



- N734d. Cibolo Formation (upper) [50 ft below base of Word-type rock, 1.9 mi N 26° W of Ojo Bonito, Chinati Peak Quad.]
- N734e. Bone Spring Formation [75 ft above the Hueco Formation, northernmost hill of Baylor Mts., W side of Texas 54, E side of hill 4402, 0.6 mi S 22.5° W of BM 3806, Van Horn (30') Quad.]
- N734j. Road Canyon Formation (Leonardian) [1.37 mi S 4° W of Willis Ranch house, 0.98 mi N 68° E of hill 5801, Hess Canyon Quad.]
- N735a. Road Canyon Formation [Old Word Ranch, Hess Canyon Quad.]
- N735c. Word Formation (Willis Ranch Member) [Hess Canyon, NE of Hess Ranch, same as locality 706e, Hess Canyon Quad.]
- N735e. Road Canyon Formation [0.35 mi N 82° W of Old Payne Ranch site, 0.8 mi S 46° E of hill 4861, Monument Spring Quad.]
- N735f. Skinner Ranch Formation (Sullivan Peak Member) [Hill 5300, Lenox Hills, Altuda Quad.]
- N735i. Cathedral Mountain Formation [sandstone bed below Road Canyon Formation, just E of A7-2, 0.3 mi NNW of Old Payne Ranch, Monument Spring Quad.]
- N735j. Capitan Formation [canyon N of Pine Canyon, Guadalupe Mts.]
- N735w. Road Canyon Formation [1.48 mi S 64.5° W of Old Word Ranch house, 0.67 mi S 48° E of hill 5611, Hess Canyon Quad.]
- N736b. Skinner Ranch Formation (Sullivan Peak Member) [0.08 mi S 56° E of hill 4801, S end of Lenox Hills, Monument Spring Quad.]
- N736c. Skinner Ranch Formation (Sullivan Peak Member) [fusulinids from E end of faulted block, 1 ft below top of massive Sullivan Peak, same locality as 736b]
- N736d. Skinner Ranch Formation (Sullivan Peak Member) [0.35 mi S 2° E of hill 4801, S end of Lenox Hills, 1.05 mi N 51° E of Lenox, Monument Spring Quad.]
- N736e. Cathedral Mountain Formation [small hill 0.55 mi S 75° W of hill 4861, 1.6 mi N 72° W of Old Payne Ranch site, Monument Spring Quad.]
- N736f. Road Canyon Formation (Bed H) [massive ledge, same locality as 736e]
- N736g. Road Canyon Formation (Bed F) [massive 6 ft of fusulinid limestone; same locality as 736e]
- N736h. Cathedral Mountain Formation [ammonites in conglomerate, 0.6 mi S 66° W of hill 4861, 1.55 mi N 76° W of Old Payne Ranch site, Monument Spring Quad.]
- N736j. Word Formation [0.67 mi S 17° W of hill 4861, 1.2 mi S 85° W of Old Payne Ranch site, Monument Spring Quad.]
- N736o. Road Canyon Formation [92 ft below top, 0.75 mi S 32° E of Sullivan Peak (BM 6125), 2.15 mi S 72° W of hill 4910, Altuda Quad.]
- N736p. Road Canyon Formation (near top) [same locality as 736o]
- N736q. Word Formation [fusulinid limestone near base of Word, 0.57 mi S 32° E of Sullivan Peak (BM 6125), 2.23 mi S 76° W of hill 4910, Altuda Quad.]
- N736r. Road Canyon Formation [ammonite in Road Canyon near top of hill, E slope of spur S of Sullivan Peak, in bed C of section 4/1/66, Altuda Quad.]
- N736v. Road Canyon Formation [from lowest bioherm, in face of hill 5801, 1.45 mi N 55° W of Hess Ranch, 0.25 mi S 67° E of hill 5801, Hess Canyon Quad.]
- N736w. Word Formation (Willis Ranch Member) [float on Road Canyon outcrop, same locality as 736v]
- N737c. Road Canyon Formation (Ammonite Bed) [1.65 mi N 76° W of Old Payne Ranch site, 0.7 mi S 73° W of hill 4861, Monument Spring Quad.]
- N737f. Cathedral Mountain Formation (Bed J) [1.6 mi N 78° W of Old Payne Ranch, 0.68 mi S 63° W of hill 4861, Monument Spring Quad.]
- N737g. Road Canyon Formation (Ammonite Bed) [2.15 mi N 82° W of Old Payne Ranch, 1.23 mi S 73° W of hill 4861, Monument Spring Quad.]
- N737h. Road Canyon Formation [on road 230 ft SW of house, 2.1 mi N 82° W of Old Payne Ranch site, Monument Spring Quad.]
- N737i. Road Canyon Formation (lower) [Road just NW of house, 2.1 mi N 82° W of Old Payne Ranch site, Monument Spring Quad.]
- N737j. Skinner Ranch Formation (originally listed as Cathedral Mountain Formation) [1.4 mi N 70° W of point 4269, 1.37 mi S 52° W of point 4386, Monument Spring Quad.]
- N737m. Road Canyon Formation (Bed B) [with small *Enteleles exiguus* Cooper and Grant, 2.25 mi S 60° W of Old Payne Ranch site, 2.1 mi N 59° W of point 4386, Monument Spring Quad.]
- N737o. Road Canyon Formation (Bed F) [same locality as 737m]
- N737p. Road Canyon Formation (topmost layer of Bed H) [same locality as 737m]
- N737q. Road Canyon Formation (Bed H) [fourth limestone layer below top of Bed H, same locality as 737m]
- N737r. Road Canyon Formation (Ammonite Bed) [1.22 mi S 55° W of hill 4861, 1.96 mi S 89° W of Old Payne Ranch site, Monument Spring Quad.]
- N737s. Cathedral Mountain Formation (*Perrinites* Bed) [due W of new house, 1.85 mi S 87° W of Old Payne Ranch, 1.15 mi S 52° W of hill 4861, Monument Spring Quad.]
- N737t. Gaptank Formation (*Prouddenites* Zone), Missourian [0.58 mi S 45° E of hill 5300, 1.37 mi N 70° E of hill 4902, Altuda Quad.]
- N737x. Road Canyon Formation (Ammonite Bed) [1.4 mi N 80° W of point 4386, 2.5 mi S 38° W of Old Payne Ranch site, Monument Spring Quad.]
- N737z. Word Formation [same locality as 737x]
- N738e. Cibolo Formation (Breccia Zone of Udden) [boulder from breccia bed just under bioherm at 728-1, 0.8 mi N 83° E of Cibolo Ranch, Chinati Peak Quad.]
- N738k. Cibolo Formation (Thin-bedded Zone) [25 ft below *Liosotella* bed, slope above largest bioherm, 1.3 mi N 75° E of Cibolo Ranch, Chinati Peak Quad.]
- N738m. Cibolo Formation (Thin-bedded Zone) [about middle of thin-bedded member, 1.3 mi N 72° E of Cibolo Ranch, Chinati Peak Quad.]

- N738q. Cibolo Formation [basal spicule bed, W side of largest bioherm, 1.3 mi N 75° E of Cibolo Ranch, Chinati Peak Quad.]
- N738x. Cibolo Formation (Thin-bedded Zone) [50 ft stratigraphically below the base of the yellow dolomite zone, on hill, W side of largest bioherm, 1.3 mi N 75° E of Cibolo Ranch, Chinati Peak Quad.]
- N738y. Cibolo Formation (Thin-bedded Zone) [170 ft below yellow dolomite and 10 ft below top of a thick limestone; same locality as 738x]
- N738z. Cibolo Formation (Thin-bedded Zone) [fusulinids from a thick limestone in midst of thin-bedded zone in hill above largest bioherm; locality same as 738x]
- N739a. Road Canyon Formation or Word Formation (China Tank Member) [mouth of canyon, 0.4 mi N 29° W of Old James Ranch, 2.7 mi N 71° W of Altuda, King brothers map of Glass Mts. (P. B. King, 1931); lowest fusulinid bed]
- N739b. Word Formation (Willis Ranch Member) [upper fusulinid bed, same locality as 739a]
- N739d. Road Canyon Formation (Ammonite Bed) [1.4 mi N 80° W of point 4386, 2.5 mi S 38° W of Old Payne Ranch site, Monument Spring Quad.]
- N739e. Road Canyon Formation (Ammonite Bed) [same locality as 737x]
- N739f. Road Canyon Formation? [low hill at base of Del Norte Mts., 0.95 mi due W of point 4386, Monument Spring Quad.]
- N739i. Hess Formation [75 ft below top of hill closed by 5750 ft contour, 0.3 mi SW of hill 5821, and 0.2 mi SE of hill 5767, Hess Canyon Quad.]
- N739j. Cibolo Formation (Spicule Zone of Udden) [ravine 1.5 mi NE of volcanic plug, one mile S of E end of Permian outcrop along Sierra Alta Creek, Chinati Peak Quad.]
- N739m. Cibolo Formation (Breccia Zone) [bioherm E of biggest bioherm, 1.6 mi NE of Cibolo Ranch, on Sierra Alta Creek, Chinati Peak Quad.]
- N740m. Capitan Formation [1.55 mi N 75° E of Pratt Lodge, 2.12 mi S 83° E of hill 6560, NE corner of Guadalupe Peak Quad.]
- N740o. Capitan Formation [about same level as locality 740n but on SW side of Yucca Canyon, Carlsbad Caverns West (15') Quad., New Mexico-Texas]
- N741h. Hueco Formation [S side of gully S of reef, 0.3 mi S 17° W of Alacran Mt., 2.2 mi N of Hueco Inn, Hueco Mts. (15') Quad.]
- N741i. Road Canyon Formation [approximately equal to locality 741a]
- N742a. Hess Formation [5675 ft on SW side of knob, 0.18 mi S 50° E of hill 5767, 0.3 mi S 54° W of hill 5821, NW of Wolf Camp Hills, Hess Canyon Quad.]
- N742d. Lenox Hills Formation [shale between conglomerate and Decie Ranch Member, hill on front of mountains, 2 mi NE of Lenox, Monument Spring-Altuda quadrangles]
- N768. Permian (Kaibab) [Camp 73 in Canyon of Cascado River, Grand Canyon of the Colorado River, Arizona]
- N768a. Kaibab [Canyon of Diamond River, Grand Canyon of the Colorado, Arizona]
- N776. Permian [Union Range, 20 mi NW of Nebraska City, Nebraska]
- N776a. Upper Carboniferous = Permian (Phosphoria) [Long Valley, Nevada]
- N814. Word Formation equivalent (*Waagenoceras* Zone) [Palo Quemado, NW end of Las Delicias Valley, Coahuila, Mexico]
- N3361. (Bowsher loc.) Bursum Formation [100 ft below the level of the Tularosa Clay Pit fauna, shale and limestone in round hill above microgranite sill, NW ¼ NE ¼ sec. 2, T. 15 S., R. 10 E., Otero County, New Mexico]

## Glass Mountains Localities by Formation (Revised)

(cf. Part I, pages 165-166)

Capitan Limestone Formation: USNM 732q.

Cathedral Mountain Formation: AMNH 500, 504; Moore 23; USNM 702, 702a, 702a<sup>1</sup>, 702b, 702ent, 702inst, 702-low, 702un, 703a<sup>1</sup>, 703b, 703bs, 704z, 707q, 708, 708c, 708u, 708x, 709, 709o, 710b, 711q, 711r, 711w, 712o, 713p, 713t, 713v, 713w, 717g, 721f, 721u, 721v, 723k, 723n, 723p, 723u, 723y, 724i, 724k, 724m, 724n, 724r, 724s, 724t, 726o, 726u, 726v, 726w, 726x, 726y, 727o, 727q, 727w, 727x, 729r, 729z, 730q, 730u, 731b, 731n, 731q, 731t, 732u, 733m, 735b, 735g, 735i, 736t, 737f, 737j, 737s, 737v, 741s.

(Wedin Member): USNM 700-l, 700x, 710d, 714v, 714w, 714wa, 717e, 723v, 727p.

Gaptank Formation: USNM 700, 700a, 700b, 700e, 700f, 700g, 701y, 704d, 705ca, 705f, 705i, 705q, 705v, 708p, 713e, 715z, 716k, 730m.

(*Uddenites*-bearing Shale Member): USNM 700i, 701e, 701f,

701p, 701q, 701r, 701t, 701u, 701v, 701x, 702j, 702k, 702n, 702q, 702r, 703-l, 703o, 703p, 703x, 705h, 713a, 713b, 713g, 713o, 713u, 721h, 721i, 721-l, 721m, 730n.

Hess Formation: USNM 709g, 709h, 713x, 715q, 716a, 716g, 719q, 722p, 723b, 726n, 729e, 729u, 742a.

(Taylor Ranch Member): USNM 702d, 702e, 702f, 702m, 716u, 716o.

Lenox Hills Formation: USNM 704f, 704q, 704r, 705, 705k, 705m, 705s, 706g, 707j, 707ja, 707m, 707u, 707o, 707s, 709t, 709w, 710w, 713j, 713q, 713y, 715, 715b, 715-l, 716r, 718y, 719r, 720z, 723d, 723r, 724x, 727i, 730a, 731k, 737u, 742d.

Neal Ranch Formation: USNM 701, 701a, 701a<sup>1</sup>, 701a<sup>2</sup>, 701a<sup>3</sup>, 701b, 701c, 701d, 701g, 701h, 701j, 701k, 701-l, 702h, 702t, 706x, 708b, 708w, 708y, 712w, 712z, 713h, 713k, 713-l, 715e, 718e, 719a, 721g, 721k, 721n, 722w, 722x, 727d, 727e, 730c, 731i, 731-l, 742c.

Road Canyon Formation: AMNH 501, 503, 507, 509; USNM 700v, 702c, 703, 703a, 703c, 703d, 706f, 707e, 709c, 710h, 710i, 710u, 710z, 712q, 712t, 716x, 716xa, 716z, 719w, 719x, 720d, 721j, 721o, 721r, 721s, 721t, 721w, 721x, 721y, 721z, 722e, 722f, 722g, 722v, 723a, 723x, 724a, 724b, 724c, 724d, 724j, 726c, 726d, 726e, 726f, 726z, 726za, 731e, 732i, 732j, 732m, 732r, 732t, 732w, 733a, 733b, 733n, 734j, 735a, 735w, 736x, 737n, 737q, 737y, 741a, 741i.

Skinner Ranch Formation: AMNH 520; USNM 705a, 705b, 705-l, 705n, 705o, 705r, 707h, 707u, 707z, 709a, 709u, 709v, 709z, 711d, 711i, 711k, 711o, 711p, 711z, 712n, 712p, 713n, 714p, 714q, 714z, 715n, 716q, 716t, 717v, 719y, 720e, 720f, 720g, 720j, 722m, 722o, 723h, 723-l, 723o, 723q, 723s, 724-l, 724p, 724q, 726h, 726j, 726-l, 727b, 727f, 727h, 727m, 727n, 729j, 729-l, 730o, 730r, 730s, 730v, 731o, 733r, 739-l.

(Decie Ranch Member): USNM 707a, 707g, 707-l, 707v, 707w, 707x, 708q, 708z, 713s, 714e, 714t, 715a, 715c, 715v, 716p, 717i, 719s, 727t, 727u, 729i, 732b, 733h.

(Dugout Mountain Member): USNM 700o, 700p, 700r, 700s, 700t, 732d, 732e, 733-l.

(Poplar Tank Member): USNM 703y, 707ha, 707i, 708a, 708e, 710x, 713r, 718v, 729f, 729q, 731f, 741k.

(Sullivan Peak Member): USNM 700y, 704y, 707, 707b, 707c, 707d, 707t, 708v, 709-l, 710r, 710y, 713c, 713d, 713i, 713m, 713z, 714y, 715f, 715h, 715j, 715m, 715o, 715p, 715u, 717a, 718z, 722h, 722j, 722k, 722-l, 723e, 727a, 729h, 729m, 729o, 729p, 730k, 731g, 733j, 735f, 739g.

Word Formation: USNM 719e, 731p, 731u, 732s, 737b.

(Appel Ranch Member): USNM 704, 706d, 714o, 715i, 716v, 719z, 722t, 726t, 727j, 731z.

(China Tank Member): USNM 703e, 706a, 706c, 706z, 713, 721p, 726r, 726s, 733q.

(Lenses between Willis Ranch and Appel Ranch members): USNM 706b, 732c, 737w, 741p, 741q, 742b.

(Willis Ranch Member): AMNH 505, 506; USNM 706, 706e, 718d, 723t, 723w, 724u, 731h, 731m, 735c.

## Guadalupe Mountains and Sierra Diablo Localities by Formation (Revised)

(cf. Part I, page 166)

### Bell Canyon Formation

(Hegler Member): AMNH 635; USNM 731, 732a, 740c, 740d.

(Lamar Member): AMNH 25, 37, 38, 39, 40, 347, 348, 351, 373, 384, 430; USNM 725e, 728i, 728p, 728q, 728r, 728s, 738, 738b.

(McCombs Member): AMNH 385, 409.

(Pinery): AMNH 33, 375, 397, 398, 401, 435, 437, 524, 528, 537, 636; Moore 30; USNM 725h, 725n, 733, 734, 736, 736a, 748.

(Rader): AMNH 388, 389, 403, 404, 410; USNM 725f, 725g, 725o, 735, 740a, 740g, 740h, 740i, 740j.

Bone Spring Formation: AMNH 46, 369, 492, 497, 591, 592, 624, 625, 628, 629, 631, 632, 633, 634, 655, 658, 660, 661, 663, 696, 697, 699; USNM 725c, 725s, 725y, 728e, 728f,

728g, 728h, 728t, 728v, 729, 741, 742, 744, 745, 746.

(Cutoff Member): AMNH 678; USNM 747.

Capitan Formation: AMNH 475, 725, 774, 799, 801, 803, 804, 806, 817, 820, 830, 837, 840, 843, 847, 853; USNM 725i, 725j, 725k, 725-l, 725m, 725p, 728u, 731j, 735j, 737a, 738a, 739, 740, 740k, 740-l, 740m, 740n, 740o, 748a, 750, 750a, 750b, 750e, 750f, 750g.

Carlsbad Formation: AMNH 417.

### Cherry Canyon Formation

(Getaway Member): AMNH 21, 28, 496, 512, 519, 547, 585, 600, 652; Moore 31; USNM 728, 728w, 730, 732.

(Manzanita Member): AMNH 402.

(South Wells Member): AMNH 414.

Hueco Group: AMNH 390, 626, 653, 700; USNM 499b, 712d, 712e, 712m, 719, 720a, 720b, 720c, 725a, 725b, 725z, 728d, 728y, 741h.

## Chinati Mountains Localities by Formation (Revised)

(cf. Part I, page 166)

### Cibolo Formation

(Brecciated Zone): AMNH 703; USNM 728j, 728k, 728-l, 728m, 738c, 738r, 738s, 739m.

(Spicule Zone): USNM 725v, 738f, 738o, 738q, 739k.

(Thin-bedded Zone): USNM 738g, 738-l.

(Transition Zone): USNM 738d, 738h, 738n, 738t.

Ross Mine Formation: USNM 733z.

## Concluding Remarks

This study of the brachiopods of West Texas and their stratigraphic setting does not exhaust these subjects. Our sampling of the strata of the Glass Mountains, although extensive, was not exhaustive. Any bioherm not sampled by us is a possible source of new taxa. Many thin beds and some lenticular bands not previously sampled offer attractive possibilities for further study. Still greater opportunities appear in the Guadalupe Mountains and the Delaware Basin. Our sampling in these areas was cursory and designed to help us understand the Girty species so that we could more accurately identify Glass Mountains materials. The Delaware Basin has never been thoroughly collected and offers promise because there is considerable silicification of the brachiopods.

The Capitan Limestone in the Guadalupe has only been cursorily collected. This will involve sledge hammer work and the breaking of great quantities of rock to produce an adequate collection, but the reward should be great for the effort.

The Sierra Diablo, Hueco, and Baylor Mountains have not been well collected. Our collections and Stehli's come from only a narrow, although critical, part of the Sierra Diablo. None of the higher beds has been more than scratched.

In the Marathon region three problems needing to be studied are outstanding: (1) the stratigraphic sequence in the Sierra del Norte; (2) more detailed study of the Road Canyon fauna; and (3) further environmental studies based on sediments and fossils—a cooperative venture.

**SIERRA DEL NORTE.**—In the part of these mountains embraced by the Monument Spring quadrangle, a long Word sequence with higher beds has been mapped but not collected. The lower part of this sequence is now known to consist of Cathedral Mountain and Road Canyon formations. A Cretaceous limestone is included in the sequence. To the south, the Word Formation thins and some beds of the Skinner Ranch Formation, tilted at a high angle, appear at the base of the mountains west of Dugout Mountain (locality 737j). This entire area needs detailed mapping and/or collecting.

**ROAD CANYON FAUNA.**—We had no problems with the Road Canyon fauna until we started work on the hills (5801 and 5453) northwest of the Hess Ranch. On the east side of hill 5801 (locality 706f) exposures are excellent, the sequence fairly well provided with bioherms at the base and near the top. Here we noted some brachiopods with Word affinities such as *Echinosteges*, *Costispinifera*, *Spiriferella*, and *Paucispinifera*.

We suspected a possibility of having collected float blocks from the Word (Willis Ranch Member) higher on the hill but a close search of the slopes revealed no blocks. Furthermore, here and on the west side of this hill we found lenses in the shaly beds immediately above the Road Canyon (locality 720d). The shaly beds are like the Word and would be mapped with it but the fossils of the lenses are unusual forms not readily identified with either Word or Road Canyon formations.

In the sequence of Road Canyon and Word formations leading up to Sullivan Peak, Ross (1962a:1732) found the "Third Limestone Member of the Word" of P. B. King at the top of the Road Canyon Formation. In the same sequence, far above the Road Canyon (locality 731u), we found brachiopods and ammonites characteristic of the Word Number 3 (= Willis Ranch Member).

In the foothills of the Sierra del Norte, the Road Canyon consists of thin limestones, often a sand or gravel of fusulinids, intercalated in shaly beds of Word Formation type. Here too, a mixture of characteristic Road Canyon forms was found with some Word fusulinids and brachiopods (see Garner Wilde's comments herein on locality 732j in the faunal list of fusulinids that he identified). West of Sullivan Peak the Road Canyon appears to fray out into thin limestone beds by intercalation of yellowish shale suggestive of the Word. Close collecting and tracing of Road Canyon strata from the site of the Old Word Ranch to and into the foothills of the Sierra del Norte is greatly needed because of the critical position of the Road Canyon in correlation. It has obvious affinities with the Cutoff Shale of the Guadalupe Mountains and part of the San Andres Mountains of New Mexico.

**PALEO-ENVIRONMENTAL STUDIES.**—It is interesting to note that studies of the sediments of the Glass Mountains and Chinati Mountains have led sedimentologists to conclude that these deposits were formed in deep water and that the included limestone lumps ("bioherms") are the result of submarine slide and reef talus. Rigby (1958:308) interpreted the *Scacchinella* bioherms of the Brecciated Zone of the Cibolo Formation of the Chinati Mountains as reef talus. The Decie Ranch Member of the Skinner Ranch Formation is a similar deposit

but differently interpreted. Bioherms of the Glass Mountains sequence are interpreted as slide blocks (Rogers, 1972). Paleontologists, on the other hand, regard the so-called slide masses as bioherms in place. The bioherms contain fossils that are believed to have been shallow water types; algae and some corals are also present. We have stated our views on these structures in part I, and they need not be repeated here. A cooperative study by practitioners of the two disciplines is needed.

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# Index

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**Footnotes**, when few in number, whether annotative or bibliographic, should be typed at the bottom of the text page on which the reference occurs. Extensive notes must appear at the end of the text in a notes section. If bibliographic footnotes are required, use the short form (author/brief title/page) with the full reference in the bibliography.

**Text-reference system** (author/year/page within the text, with the full reference in a "Literature Cited" at the end of the text) must be used in place of bibliographic footnotes in all scientific series and is strongly recommended in the history and technology series: "(Jones, 1910:122)" or ". . . Jones (1910:122)."

**Bibliography**, depending upon use, is termed "References," "Selected References," or "Literature Cited." Spell out book, journal, and article titles, using initial caps in all major words. For capitalization of titles in foreign languages, follow the national practice of each language. Underline (for italics) book and journal titles. Use the colon-parentheses system for volume/number/page citations: "10(2):5-9." For alinement and arrangement of elements, follow the format of the series for which the manuscript is intended.

**Legends** for illustrations must not be attached to the art nor included within the text but must be submitted at the end of the manuscript—with as many legends typed, double-spaced, to a page as convenient.

**Illustrations** must not be included within the manuscript but must be submitted separately as original art (not copies). All illustrations (photographs, line drawings, maps, etc.) can be intermixed throughout the printed text. They should be termed Figures and should be numbered consecutively. If several "figures" are treated as components of a single larger figure, they should be designated by lowercase italic letters (underlined in copy) on the illustration, in the legend, and in text references: "Figure 9b." If illustrations are intended to be printed separately on coated stock following the text, they should be termed Plates and any components should be lettered as in figures: "Plate 9b." Keys to any symbols within an illustration should appear on the art and not in the legend.

**A few points of style:** (1) Do not use periods after such abbreviations as "mm, ft, yds, USNM, NNE, AM, BC." (2) Use hyphens in spelled-out fractions: "two-thirds." (3) Spell out numbers "one" through "nine" in expository text, but use numerals in all other cases if possible. (4) Use the metric system of measurement, where possible, instead of the English system. (5) Use the decimal system, where possible, in place of fractions. (6) Use day/month/year sequence for dates: "9 April 1976." (7) For months in tabular listings or data sections, use three-letter abbreviations with no periods: "Jan, Mar, Jun," etc.

**Arrange and paginate sequentially EVERY sheet of manuscript—including ALL front matter and ALL legends, etc., at the back of the text—in the following order:** (1) title page, (2) abstract, (3) table of contents, (4) foreword and/or preface, (5) text, (6) appendixes, (7) notes, (8) glossary, (9) bibliography, (10) index, (11) legends.



